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# Critical Analysis of Ability Grouping in Selected Periodicals 1918-1960

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# CRITICAL ANALYSIS OF ABILITY GROUPING IN SELECTED PERIODICALS 1918-1960

by

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## LIFE

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# CHAPTER I

## INTRODUCTION

To enter the educational research ranks in the hope of making even a minor contribution to the study of grouping may indicate a bravery only to be matched by one's foolhardiness. To group or not to group has been a query unanswered for more than a century and our attempt within the scope of this paper is not to bring a definitive answer. Rather, we endeavor to bring insight to a continuingly controverted question through the careful analysis of the articles written on this subject in professional periodicals, during the period 1918-1960.

This time span for the study was dictated rather than chosen; dictated by both historical and philosophical implications. Philosophically, it was prescribed, because the tenet to provide, "education for all the children of all the people," set the tone for the popular movement in a society that was making a great effort to extend the possibility of education to an ever increasing number of individuals. Historically then, 1918 was marked, since by that year all the states had enacted compulsory school attendance legislation with Tennessee being the final state. The upper limit, 1960, was set because all the most recent periodical issues were complete and available for consideration.

The specific purpose of this paper is to determine the characteristics of ability grouping as indicated in the articles on this topic appearing in a

selected list of professional periodicals between 1918 and 1960; to determine in what ways concepts and changes, as reflected in the professional periodical literature, have indicated trends and development of procedures for present grouping; and to determine the direction of the changes in organization that have occurred for purposes of instruction. A further step is to determine what causative or influencing factors, as evidenced in the articles, have been involved in the progression.

One may well ask why periodicals were chosen for the source of information and documentation to achieve this purpose. Why not books--newspapers?

For our concern the periodical offered the greatest potential for fulfillment of the purposes of this study. The periodical is unique. It is essentially a compromise between the newspaper and the book. Though it lacks the permanence of a book and though it is much more sensitive to the nuances of public opinion it has much more than the highly transient value of the newspaper. Its influence, its potential, as a social and educational force, is not restricted to the subscriber or newsstand purchaser nor is it bound by the limitations of the book.

To assist in substantiation of these claims we need not search beyond Frank Luther Mott's dependable source which was awarded the Pulitzer Prize for history. Dean Mott makes two assumptions about the importance of American magazines. "First, magazines must keep very close to their public and therefore catch the slightest variations of the popular taste. Second, the periodical files furnish an invaluable contemporaneous history of their time."[1]

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[1]Frank L. Mott, A History of American Magazines, 1741-1850, (New York, 1930), I, 205.

If these two assumptions are true and though they lack scientific verification just the number of periodicals alone warrants the conclusion that they are an important medium for the expression and formation of opinion and a comprehensive record of ideas.

"Save the magazines, let the books burn," is the drastic procedure advised in a leading library journal.[2] While we are not recommending such dire action this quotation is indicative of the regard held by the professional librarian for periodicals. Similar respect for the reference value of periodicals is given by Louis Kaplan in College and Research Libraries. His comments are based on a fundamental consideration. He reminds us that, "Perhaps, the reader feels that an undue emphasis is here being placed on the reference value of periodicals. Nevertheless, let it be kept in mind that most libraries expend, exclusive of binding costs, at least 40 per cent of their book budget for periodicals."[3]

The distinct contribution of periodicals to reference work has been admirably described also by Peterson, Wolseley, Wood, and Shores, and other authors of well-known textbooks on basic reference material and library assistance to readers. Louis Shores treats this adequately and the major points of agreement may be summarized as follows: (1) They furnish articles and papers more recent than any book on a subject, particularly in the ever-

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[2]Ralph Munn, "Library Mission of Magazines," Wilson Library Bulletin (October 1929), 6.

[3]Louis Kaplan, "Reference Work with Periodicals," College and Research Libraries, XIX (June 1940), 19.

changing fields of politics, economics, education, science, and technology. The latest ideas on any subject will be found in the periodical literature, rather than in a book. (2) They contain articles on subjects about which the library may have no books and particularly on matters on which no books have been written. Most original scientific work is first published in a periodical. (3) Authorities and specialists in many subjects contribute to periodicals and frequently never write books. Which persons are at work on a particular problem and the results of work already done are usually found in periodicals. (4) The bound files of periodicals are indispensable to the investigation into the habits, interests, and achievements of any period of history. The social historian has no richer source.[4]

Authorities in library science are not alone in this regard for periodicals as an important research tool. John Walton, who has written a doctoral dissertation on "Major Emphases in Education in a Selected List of General Periodicals, 1928-1947," reports on the reasons for utilizing general magazines as the source for his endeavor. He maintains that what is written in leading periodicals is either an expression of public opinion or an attempt to influence public opinion; it is either an interpretation of what has happened or a prophecy of what should or will happen. Furthermore, he states that the opinions expressed in the magazines are more timely than those found in books. But he emphasizes that there has been a surprisingly small amount of research that has utilized them in spite of the importance of the magazine as a source

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[4]Louis Shores, Basic Reference Books (Chicago, 1939), pp. 144-172.

of information.[5]

Though John Walton's research concerns the general magazines much of what he states concerning the utilization of magazines could also relate to professional writings with one chief difference. The effects of specialized magazines are vertical rather than horizontal. An educational publication affects the profession it serves by conveying news created by the group, evaluating trends within, and providing an outlet for ideas. It must be remembered that these also command attention far beyond the reading audience suggested by their comparatively small circulations. But it appears that the professional periodical also offers a neglected source of social history and an almost unexplored field for the study of education through its journals. It has the potential for such an honored place among the tools of research that it has the right to be treated sui generis and not just as a poor relation of a book.

The amount of periodical literature available has reached prodigious proportions as may be gauged by the fact that the Education Index records some two hundred and thirteen professional periodicals in its most recent edition. Therefore, the next question may be: How were the particular periodicals chosen for this study? On what bases were the periodicals selected from this wealth of material available?

To answer this question it must be remembered that an important consideration in choosing a list of resources for any project is the character of the subject and the objectivity and emphasis of the sources. For this study it

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[5]John Walton, "Education in the General Magazine," School and Society, LXXII (December 1950), 369.

seemed necessary that the list of periodicals should be representative of the various fields of education and should consist of those that have the greatest reference and educational value and yet would yield the most accurate information.

A given periodical does have distinctive characteristics and does awaken particular responses in its readers. Objectively, this "impact" is difficult to prove, difficult even to describe. The impact of a periodical is composed of a thousand related and diverse impressions but it would not be presumptive to generalise that a periodical does have impact, if we think of this as the capacity to create an effect. To assist, therefore, in achieving the purposes of this study it was necessary, in order to determine the specific selections, to consult additional authorities. Though we believe that no ready-made selection by others can be a substitute for careful study of individual needs, still, on the other hand, since the number of periodicals possible for investigation necessarily had to be limited, the experience of librarians and other researchers also had to be utilised as far as possible.

In borderline cases, the ultimate criterion for inclusion has been: Is this periodical important for a complete study of ability grouping? Admittedly such a criterion is not the most precise one, and on occasion, the selection had to come down to a matter of personal taste or prejudice. Undoubtedly, every highly selective list is liable to the same lack of objectivity; the only possible rejoinder is the assurance that all potential inclusions have been examined and the utmost care and consideration used in the final choice.

To assure as much objectivity as possible three criteria were adopted. (1) All periodical selections were based upon the recommendations of the

classified lists of the American Library Association; (2) and also Farber's, Classified List of Periodicals for the College Library; (3) each periodical had to have a record of continuous publication for the period. (N.B. Two exceptions were necessary: Journal of Educational Research and Journal of Educational Sociology).

The following periodicals have been selected upon these bases:

1. EDUCATION - Volume I - 1880

   Selected because each issue is devoted to a particular educational topic, and contains brief articles on various aspects of that topic. A different editor, a specialist on the subject treated, serves for each issue.

2. EDUCATIONAL ADMINISTRATION AND SUPERVISION - Volume I - 1915

   Contains articles of general interest to educators, but is mainly concerned with matters of particular interest to those dealing with teachers in training or in service. Many of the articles are reports of experiments.

3. ELEMENTARY SCHOOL JOURNAL - Volume I - 1900

   Reports investigations pertaining to classroom procedure, supervision, and administration also emphasising instruction, administration and social changes. A publication of the Department of Education of the University of Chicago.

4. JOURNAL OF EDUCATION - Volume I - 1875

   Published by Boston University, School of Education. Since 1955 each issue is devoted to a single topic. Topics are concerned with both elementary and secondary schools.

5. JOURNAL OF EDUCATIONAL PSYCHOLOGY - Volume I - 1910

   Contains articles on the psychology of - school subjects, experimental studies of learning; the development of interests, attitudes and personality, particularly as related to school adjustment; emotion, motivation and character; mental development and methods.

6. JOURNAL OF EDUCATIONAL RESEARCH - Volume I - 1920

These articles are almost entirely confined to studies of administrative and instructional problems and news of current research projects.

7. JOURNAL OF EDUCATIONAL SOCIOLOGY - Volume I - 1927

Emphasizes the study of education from the point of view of the relation of the individual to society and to the group in which he functions. Some of the articles are of a strictly sociological nature.

8. NATIONAL EDUCATION ASSOCIATION JOURNAL - Volume I - 1913

Contains general articles primarily concerning news and problems of the teaching profession. Official journal of N.E.A.

9. SCHOOL AND SOCIETY - Volume I - 1915

Articles deal particularly with the philosophy of education, higher education and teacher education. Topics are of current interest. Published by the Society for the Advancement of Education.

10. SCHOOL LIFE - Volume I - 1918

Official journal of the U.S. Office of Education. Gives information on federal and state educational legislation. Reports on results of studies by specialists in education fields and reports on educational activities, trends and progress, at home and abroad.

11. TEACHERS COLLEGE RECORD - Volume I - 1900

An organ of Teachers College, Columbia University. Topical articles on all phases and aspects of education by prominent individuals in the field.

12. THE SCHOOL REVIEW - Volume I - 1893

Concerned with secondary education with emphasis given to theoretical writings and to research though not neglecting the description and analysis of promising practices.[6]

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[6] A.L.A. Committee, Periodicals for Small and Medium-Sized Libraries (Chicago, 1948), pp. 47-74, and
Evan Ira Farber, Classified Lists for the College Library (Boston, 1957), pp. 38-47.

With this list complete the next step was to develop competent procedure for dealing with the data as revealed in these sources. All the articles on ability grouping published in the periodicals listed above from 1918-1960 were read and classified into descriptive categories. As each article was read it was classified as to the level of education and the type of grouping and then further classified in terms of the area of education. After this procedure was completed the contents of each article were then summarized, as briefly as possible, in accord with the following outline:

Author:
Reference:
Data:
Statement of Problem:
General Procedure for Handling Data:
Results and Conclusions:
Evaluation:

It is probable that periodicals have been the fertile field of scholars ever since their origination more than two centuries ago. The scholar appreciates the medium of publication that enables him to keep in touch with work in progress in his own and allied fields, work still in the formative living stage, not yet embalmed in book form. Articles in periodicals can be compared to statements made in conversation, open still to question, spotlighting the growing points of a subject, without the delay necessary if relayed in book form. The cumulative result is an accurate record of the evolution of a subject enlivened by this kind of spontaneity and reserved for those who find interest and challenge in uncovering its transitional secrets.

## CHAPTER II

## HISTORICAL DEVELOPMENT

While grouping in both elementary and secondary schools has been a topic of perennial interest in this country, current demands for improved instructional quality and for greater individual attention, among other factors, make it of particular concern today. But to understand the present we must walk awhile in the footsteps of the past. Edgar W. Knight calls our attention to the wise observation that "no man is fit to be entrusted with the control of the present, who is ignorant of the past, and no people who are indifferent to their past, need hope to make their future great."[1] With this sobering admonition we turn to begin an historical summary but are cautioned by Edwards and Richey to remember that, "education at any given time or place is in large measure the product of the civilization of which it is a part, however much it may be influenced by custom and tradition it is always sensitive to contemporary social forces."[2]

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[1]Edgar W. Knight, "History of Education," The Encyclopedia of Educational Research (New York, 1950), p. 551.

[2]Newton Edwards and Herman G. Richey, The School in the American Social Order (Chicago, 1947), p. xi.

Let it be clear at once that the intention here is not to try to give an exhaustive and complete chronology. However, it is important for anyone who would face realistically the problems of American education today to look again at the origins of our American traditions because they are important for understanding and dealing with the present. The roots of some of our most controversial and urgent problems of the present are firmly embedded in the colonial period. We shall not deal with all or even a large part of colonial history. What we shall attempt to do is to select only those basic patterns which help to explain the organization of education in the past, in order to throw light upon the present status of ability grouping, to view it in its proper perspective. Therefore, the chapter which follows is devoted to a description of the first American graded school organization, and a review of some of the devices and procedures which have been applied in an effort to improve and modify the formalized, graded elementary school which had developed. A brief account is also given of some of the major forces which during the present century have been at work in an endeavor to create an organization which would meet in a more adequate way what appears to be the current educational needs of children.

It is proper for us to remember that American society was as cosmopolitan in its origins as it has been in its mature development and that most of the distinguishing characteristics of American institutions and society may be traced by one channel or another to European tradition. Inasmuch as the colonists were steeped in the social traditions of Europe and because the economic forces active there also operated in America, the settlers tended to duplicate, with certain important exceptions, the social structure and social

institutions of the Old World. This resulted in our American Society being a product of the impact of an older culture on a new environment.

Since there is a tendency for educational policy and practice to lag behind contemporary social change Old World influences in American education were many and diverse. The American colonies were, in fact, Europe's western frontier and they were bound in a thousand ways by the traditions and customs of the Old World; by its ideology and by its religious, social, educational, economic, and political institutions. The importance of this frontier movement can easily be seen in the later periods of American history but the larger meaning of that movement as a phase in the westward progress of European civilization is our present concern. In this larger view, the settlement of the eastern seaboard is the first chapter in the history of the American frontier, and the explorers are the earliest pioneers. Therefore, the first stage of culture in America grew in the soil of the thirteen original colonies. Frederick Jackson Turner further strengthens this theory by pointing out that:

> The peculiarity of American institutions is, the fact that they have been compelled to adapt themselves to the changes of an expanding people, to the changes involved in crossing a continent, in winning a wilderness and in developing at each area of that progress out of the primitive, economic, and political conditions of the frontier into the complexities of city life.[3]

The structure of society and the social institutions in the colonies were patterned from the Old World but to say that they were a small copy of that social order would be incorrect. By the structure of society we mean the

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[3]Frederick Jackson Turner, The Frontier in American History (New York, 1921), p. 8.

relative power, influence, and prestige of the various classes and groups of the population. The transfer to the New World did not at first essentially change the relation of people and groups to each other. The social process, however, influenced by the new environment, gradually rearranged the people into new groups and classes and modified inherited ideas and institutions to meet the peculiar needs of American life. Class distinctions were transplanted to America and they operated very definitely in the shaping of educational endeavors.[4] The types of educational institutions established, the textbooks used, and the methods of instruction employed were in the main Old World borrowing.[5]

A general summary of the organization of elementary schools during the colonial period would present them as distinct divisions; mainly the dame school and the Latin grammar school. Both boys and girls attended the dame school and the boys who "graduated" could go on to the town reading and writing school or the Latin school, but for the girls the dame school was considered "terminal education." Thus the dame school marked the first step in the development of a system of institutionalized education. Both of these units though were ungraded schools with very limited instructional materials. The classification of children by age and achievement was hardly known. Each child was a class by himself, making his own progress in the books which he happened

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[4]Marcus W. Jernegan, Laboring and Dependent Classes in Colonial America (Chicago, 1931), pp. 5-31.

[5]Edwards and Richey, p. 26.

to bring to school.[6] There were logical reasons which supported this type of education. Each group was composed of individuals of widely ranging ages and representing many different stages of growth and achievement. This made it necessary for the teacher to hear each child's lessons separately. Moreover, the clearly fixed curriculum which was in general acceptance--the three R's of which the entire curriculum consisted, apparently satisfied the sociological demands on education fixed by society. The school was maintained to teach those skills because the home was not so equipped.

Grouping pupils was not without precedent. The Latin school had followed the practice. A "Code of Regulations," drawn up in 1799 by William Woodbridge, president of the Middlesex County, Connecticut, Association for the Improvement of Common Schools after listing the subjects to be taught, recommended the classification "of pupils of equal attainments."[7] The course of study drawn up for the Providence schools of 1800 also ordered that, "scholars shall be put in separate classes according to their several improvements, each sex by themselves."[8]

As we have stated, grouping was not without precedent, but in the earliest forms, education in this country was confined almost entirely to individual teaching. The individual child spelled his way through his hornbook, his

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[6] Collections of the Massachusetts Historical Society, XI (Boston, 1800), 379-381.

[7] Forty Years Ago, American Annuals of Education and Instruction, VII (January 1837), 18.

[8] Collections, p. 380.

primer, and later his speller, at his own rate. Once a day, perhaps, he took his turn at the teacher's desk to recite his quota of memory work. The remainder of the school day he spent on preparing assigned tasks. Only once in a while was there any experience provided which might genuinely be called group activity.

Although the last decade of the colonial period was filled with forces which tended to alter the location, support, and general administration of schools it is questionable whether the internal organization was influenced. But from the very nature of society the demands on education were changing. As society became more complex, the schools of necessity became more highly organized. The problem of the rigidity of organization in education is a difficult one to face. The reason for this is historical. To understand it one must know something of the long struggle for better and better organization meant to serve better and better the needs of children.

The story of that struggle may well begin about the year 1800 when the early attempts to teach children in groups were begun in this country. The organization of groups may be said to be the first phase of the many efforts to define an organization that could efficiently take care of more children in school. The lack and the expense of teachers made acceptable the monitorial method.[9]

This monitorial method, popularized in America by Joseph Lancaster in the early 1800's, may be said to have given a crude form of organization to the

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[9]Joseph Lancaster, The Lancasterian System of Education with Improvements (Baltimore, 1821), p. 28.

school, which had functioned almost entirely under individual instruction. The essence of the method was for the master to instruct ten monitors who in turn instructed the ten boys under each of them. In this way, with thirty monitors under him one teacher could teach three hundred pupils. Thus mass educational procedures were born with attendant faults and problems. Actually it is more significant as a scheme of administration than as a method of instruction. One of the main appeals of the monitorial scheme was its tremendous cheapness. Lancaster put the annual cost of teaching a pupil in his school at about one dollar.[10] But the chief historical service the monitorial system performed was to win the public to the support of free public instruction, since this method made it appear at first glance that public education would be quite inexpensive. The limitations of the system, however, became apparent as the years went on because the student monitors were not able to handle the pupils or manage the expanded curriculum. The monitorial plan then became merely a link in the evolution of the graded school system.

The next step in the evolution toward better school grading came through the gradual sorting out of pupils into grades and classes on the basis of readers. The new texts not only provided an enriched content, but as poorly graded as most of them were, they made possible some grouping of pupils of "like attainments."[11]

It is obvious that the simplest and most flexible form of classification

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[10] Ibid., 18.

[11] Edwards and Richey, p. 392.

practice was the type found in the one-room common school. The graded plan which is rigid classification based upon age and achievement was evolved from this form. Although some writers of this period disagree, it is usually stated that the Quincy Grammar School of Boston organized by J. D. Philbrick, in 1848, was the first school in America organized on a graded plan. It was a plan similar to that developed in the German gymnasium and which now characterizes the majority of American graded schools.

The merits of the graded plan, particularly its administrative conveniences, were soon recognized and the graded system spread throughout the country. Though the advantages were immediately obvious the disadvantages did not loom large until later. Although school administrators readily recognized the feasibility of the graded plan, the difficulty of remodeling the school buildings by partitioning the large halls of departmental schools to form a number of smaller classrooms prevented many cities from effecting the graded organization as a city-wide practice. Consequently, the extension of the graded school was slow at first, but by 1860 nearly all the cities of the county had adopted the plan.[12] This reorganization is aptly described in a government publication in which we are reminded that:

> The movement toward graded schools developed slowly at first, but by 1860 nearly every town and city of any consequence in the country, as well as many populous rural systems of schools organized on a graded basis with a defined course of study,

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[12] Frank Forest Bunker, "Reorganization of the Public School System," U.S. Bureau of Education Bulletin No. 8, (Washington, 1916), pp. 45-53.

embracing definite time limits, the whole sanctioned and protected by legislative enactment.[13]

Cities which adopted the graded system for elementary schools at a later date were able to avoid some of the pitfalls into which many of the earlier graded schools had fallen. In St. Louis, the graded plan was not formally adopted until 1857 and this was an example of a plan which carried many modifications from the original. When a new course of study was prepared in 1862 the new curriculum divided the work of each year into four ten-week units and promotions were made every ten weeks. Thus the St. Louis system had in reality also adopted a quarterly promotion plan, a unique variation from the annual promotions which were generally in vogue.[14]

The developments in school systems of which St. Louis was a type, were so unique at the time that they have generally been described as the first practical illustration of a marked deviation from the graded system with annual promotions. The advantages of these variations from the usual practices, together with the dynamic leadership of the men such as Barnard and Harris who were instrumental in effecting these or similar reorganizations, undoubtedly were potent influences in bringing to the front the disadvantages of the graded schools. New methods and practices which it was hoped would correct the most pronounced weaknesses of the formalized graded school soon made their appearance.

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[13] Ibid., 54.

[14] J. C. Boykin, "Class Intervals in City Public Schools," Report of the U.S. Commissioner of Education: 1890-1891, (Washington, 1892), II p. 982.

One weakness of the graded system, which quickly became apparent, was the difficulty of securing any grouping of pupils on a basis of annual promotion that would suit all ranges of pupil ability. This problem has not yet been solved. It is with us today and is partially the reason for the preparation of this study. It is not a new problem. It was present from the beginning of the closely graded city school systems and has been a constant concern since.

By 1870 the graded school in many of the cities had become so thoroughly organized and systematized that many undesirable practices had developed. As a result, there was a tendency to organize schools which would operate more systematically and with greater facility. In time, they became so highly organized that the perfection of organization, rather than the educational needs of the children seemed to be the chief function. This criticism of the graded school was succinctly stated by W. J. Shearer, superintendent of schools in Elizabeth, New Jersey. "Gradually others adopted the plan and by 1860 the schools of most of the cities and large towns were graded. By 1870 the pendulum had swung from no system to nothing but system."[15]

Leading educators continued to recognize the defects of the graded plan and attempts to remedy the situation were made. This concern was raised by the Superintendent of Public Instruction of Ohio, E. E. White. At the N.E.A. meeting in 1874 he remarked that there was, however, "a growing conviction among the more intelligent observers of our graded system of schools, that there are serious defects either in the system itself or in its administration.

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[15]W. J. Shearer, The Grading of Schools (New York, 1899), p. 21.

This conviction is strongest where the schools have reached the highest degree of system and uniformity.[16] About this time other state superintendents of public instruction were advocating and attempting school improvement through more careful and complete grading of subject matter and more homogeneous grouping of pupils into grades.[17]

Philbrick reporting on city school systems in 1885, summed up the movement toward gradation of schools in the following statement:

> The characteristic fact in the pedagogical organization of our city schools is the division of the schools into three grades: the high, grammar, and primary.... In the city of St. Louis the whole course of public instruction is divided into three periods of four years each; so that the pupil entering the primary at the age of six, by regular promotions, will have graduated at the high school, at the age of eighteen. The courses of these three grades are subdivided, respectively into four divisions, each intended to be completed in one year's time.[18]

Modifications in the administration of the curriculum and changes in teaching method had made small beginnings before 1885, but that year marked the beginning of a development cycle of a number of rather unique plans of organization. These historical plans of revision of the school practices

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[16] E. E. White, "Several Problems in Graded School Management," Addresses and Proceedings of the N.E.A. (Washington, 1874), p. 254.

[17] Edward H. Reisner, "Social Change and Its Effect on School Organization in the United States," The Grouping of Pupils, Thirty-fifth Yearbook of N.S.S.E. Part I (Bloomington, 1936), pp. 34-35.

[18] John D. Philbrick, "City School Systems in the United States" U.S. Bureau of Education Circular of Information, No. 1 (Washington, 1885), pp.19-20.

embodied many phases of organization which, in slightly modified form, characterize some of the schools of today. These changes were in the main changes in administrative organization aimed to provide better instruction for more children.

Preston W. Search has been named as one of the first in America to voice loud protests against the class lock-step methods of teaching and to urge complete individual progress for each pupil. He put his ideas into practical operation in Pueblo, Colorado, while engaged there as superintendent of schools from 1888-1894.[19] Apparently without any special technique, he simply determined that each child should progress at his own rate. The work in each subject in the high school was outlined in such a way that all units in each course were studied by each student, but were completed at different rates. No marks were given and the teachers' records merely indicated the number of units each student had completed satisfactorily.[20] Although the plan perhaps was applied more extensively in the high school, Search also describes its application in the intermediate grades. In the grades, the children were not expected to do the same amount of work; the brighter pupils were cared for by

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[19]Guy Montrose Whipple, ed. Adapting the Schools to Individual Differences, Twenty-fourth Yearbook of N.S.S.E., Part II (Bloomington, 1925), p. 59.

[20]P. W. Search, "Individual Teaching and the Pueblo Plan, Educational Review, VII (February 1894), 154-170.

enlarged and supplementary assignments.[21]

Obviously, the Pueblo plan had many elements which were similar to certain phases of the programs developed on the elementary level by Frederic Burk at the San Francisco State Normal School and by Carleton W. Washburne at Winnetaka. On the high school level there are some similarities between the Pueblo plan and the Dalton Laboratory plan and the Mastery Technique developed by H. C. Morrison at the University of Chicago High School. Search, however, seems to have been the first to revolt against grades as such and to place the emphasis entirely on individual progress. Doubtless each of these, as well as others that will be named, have influenced directly or indirectly many other similar variations which may be found in public schools even today. A leaflet from the U.S. Bureau of Education in 1926 listed 44 cities which reported the use of the Winnetka technique.[22] No doubt, there are also many other schools or classrooms in which various methods are used to provide for individual differences in pupils but the devices have not been given a specialized title. Data from the National Survey of Secondary Education regarding provisions for individual differences in secondary schools show at least twelve different types of provisions which in one way or another have characteristics similar to those found in the Pueblo Plan.[23]

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[21]P. W. Search, An Ideal School (New York, 1901), pp. 100-110.

[22]"Cities Reporting the Use of Homogeneous Grouping and of the Winnetka Technique and the Dalton Plan." City School Leaflet No. 22, Department of Interior, Bureau of Education (Washington, 1926), p. 19.

[23]"Provisions for Individual Difference in Secondary Schools of the United States," School Review, XXXVIII (November 1930), 641-643.

In 1886, William J. Shearer, superintendent of schools of Elizabeth, New Jersey, worked out a scheme which came to be known as the Elizabeth plan, though it was best carried out during his superintendency at Carlisle and New Castle, Pennsylvania.[24] The essential feature of this plan was that each of the eight grades was divided into three or four sections so that pupils could be grouped together according to "attainments." As soon as any pupil showed that he was ready, he was moved up from one section to the next or to the next higher grade. Dr. Keliher views this as preparatory to ability grouping. "Except that the three or four groups of pupils recited in the same class, this might be called the real forerunner of ability grouping or homogeneous grouping."[25]

Another plan which contained one element of the present ability grouping idea was the Cambridge plan. This plan, which appeared in 1891, offered two distinct tracks. For average pupils, the six years of the grammar grades were to be completed in six, for the bright pupils the course was to take four years. There were certain periods during those years when a shift from one track to another might be made. The shift permitted a completion of six years in five. A concise description follows:

> The plan....is the best known of the different devices and systems for securing opportunity for children of differing abilities to progress through the grades at different rates of

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[24] Shearer, p. 89.

[25] Alice V. Keliher, A Critical Study of Homogeneous Grouping, Teachers College, Columbia University Contributions to Education, No. 452 (New York, 1931), p. 23.

> speed. Its aim is to classify students according to ability and then to have the different classes or divisions go forward at rates appropriate to their varying abilities. Moreover, it brings the pupils of the different classes together at stated intervals and provides for reclassification...provision is made whereby a pupil may complete the work of the six grammar grades in four, five, or six years and is given opportunity to change from the slow to the fast division or vice versa.[26]

In the Portland, Oregon, plan for the organization of elementary schools, the nine-grade course of study was divided into fifty four units. A child who was a member of a regular progress group would cover six of these units each year or three each semester. The more capable children of each class were placed in a separate division which was permitted to cover eight units of the course each year, thus completing the full course in seven years. The two courses articulated at various points so that pupils might be transferred from the rapid progress to the regular groups and vice versa. The plan, as such, has lost its identity, but elements of it, particularly the division of the course into specific units with more rapid progress for superior pupils, have been developed by other schools.

In 1898, Superintendent Kennedy, in Batavia, New York, originated another scheme designed to care for the stragglers without disrupting the usual class organization. In this plan large classes were provided with extra teachers who kept the "laggards" up to the level of the class. The description by Kennedy follows:

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[26]James Van Sickle, H. Witmer and L. C. Ayres, "Provision for Exceptional Children in Public Schools," U. S. Bureau of Education, Bulletin No. 14 (Washington, 1911), p. 39.

> The instructions given to the teacher were to go into that room (an overcorwded room with fifty-three pupils in which the plan was first attempted), find the most backward children, and make them the most forward. She did that, of course, and for the first time in the history of education there was a large room leveled up, a large room in which there was no child lagging and no child retarded. The individual teacher did her work at a table, calling the child to her as she became ready for him, and detaining him as long as she deemed it expedient. She had the first claim on the child and might call on or detain him even if his class was reciting.[27]

This plan exists to some degree in certain remedial instruction schemes which are employed today. Though Superintendent Kennedy appeared to herald a "leveled up" room as an accomplishment we cannot hesitate to question this as an objective to be sought. Further explanation of this Batavia plan might prove helpful for it made special provisions for slow learning children in a school in which large classes of eighty or more pupils in each room prevailed. Each room had two teachers, one a direct instruction teacher and the other an assistant teacher who coached the "laggards" at a desk in the rear of the room. The assumption underlying the arrangement was that with extra individual instruction each child could come up to the one definite standard.[28] Accurate information as to the extent of its present use is not available, but it would seem safe to conclude that there are few cities at present in which may be found two full-time teachers in a classroom. Elements of this Batavia plan may be recognized, however, in various special classes, especially those

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[27] John Kennedy, The Batavia System of Individual Instruction, (New York, 1914), p. 11.

[28] Ibid., 41-49.

designed to bolster the achievements of over-age and retarded children.

The North Denver plan represents the reverse of the Batavia idea, with the bright pupils being singled out for special help rather than the slow ones. The class organization remained largely intact, with all pupils covering the minimum assignments and with enriched assignments in each topic provided for the brighter pupils. So that the scheme for enriching the curriculum for superior pupils might work out more effectively, each classroom was equipped with a carefully selected reference library of from fifty to seventy-five volumes. Hartwell's report of 1910 showed that one hundred and twelve cities had tried the North Denver plan.[29] Perhaps, as with other plans, the name has been obscured as elements of it have found expression in other schools. Differentiated curricula and differentiated assignments bear similar characteristics. Of course, the direct relationship of one plan to another cannot be stated positively.

Another plan which appeared at about this time takes on more than any other scheme so far discussed the characteristics of modern grouping, except in the matter of group progression. The Santa Barbara plan divided each grade into three sections, known as A, B, and C, sections. There was a minimum of material to be covered by all three groups alike, the C group covering the essentials, the B group having somewhat more extensive work, and the A group very extensive work. When A pupils were ready to be promoted, they were

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[29] C. S. Hartwell, "The Grading and Promotion of Pupils," Addresses and Proceedings of the N.E.A., (Washington, 1910) p. 296.

promoted to the C group of the grade above and then upward from section to section.

The communications received by the Commissioner of Education, in 1890, showed that several cities sectioned pupils of any one grade into two divisions, each division advancing at its own rate. Frequently, the division of pupils was supplemented by an ungraded room. In Malden, Massachusetts, the pupils were divided into bright and dull sections with equal time for both groups, but a difference in the comprehensiveness of instruction. In Owensboro, Kentucky, the bright and dull sections advanced at unequal rates but covered the same work. Cairo, Illinois, supplied additional work for the bright pupils. Elgin, Illinois, allowed the better scholars to take work in a higher grade, while Sidney, Ohio, provided electives for the bright pupils.[30] Does not this report recall for the reader similar reports of provisions for individualization, dated 1961?

In 1898 Prince reported that a few cities which operated on the yearly interval plan had opened ungraded rooms; some had divided the pupils into small sections in two or three essential subjects, permitting pupils to progress as rapidly as possible in each subject.[31] In cities which had other than yearly intervals of promotion, the variations were equally large.

Hartwell, in 1910, conducted a study to find out the extent to which school

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[30] Boykin, p. 984-1003.

[31] J. T. Prince, "Some New England Plans and Conclusions Drawn from a Study of Grading and Promotion," Addresses and Proceedings of the N.E.A. (Washington, 1898), pp. 423-432.

systems had adopted the various plans of school organization which at that time were considered radical departures from the conventional. Some of the results of his investigation may be of interest. For example, he found that 270 districts had tried the Elizabeth plan, 203 the Pueblo plan, and that 275 school systems maintained ungraded rooms.[32]

Seattle, in 1891, had developed a rather complete system of ability grouping. The primary and grammar schools were each divided into A, B, C, and D classes. The pupils of any one class, like the primary D, were subdivided into divisions according to the ability of the pupils, all pupils purused the same course, but the lower the ability of the pupils in any direction, the longer it took them to complete the course.[33] In 1926, 145 of the 163 cities of 10,000 to 30,000 population were dividing some or all of the pupils of the elementary grades into ability groups.[34]

The Santa Barbara Concentric plan divided the pupils of each grade into three groups, A, B, and C, sections. All pupils did the basic content included for the C level, but the B pupils did more extensive work than the C groups and the A groups did still more than the B pupils. Pupils from the A section were transferred to the C section of the next higher grade when transfers were made. No data are at hand as to the extent of adoption or the extent of present use

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[32]Hartwell, p. 294.

[33]T. J. Barnard, The Seattle Plan of Promotion and Classification," Report of the Commissioner of Education (Washington, 1898), pp. 335-341.

[34]"Cities Reporting the Use of Homogeneous Grouping and the Winnetka Technique and the Dalton Plan," U.S. Bureau of Education, City School Leaflet, No. 22 (Washington, 1926) p. 29.

of the plan. It is likely that the plan as such was not extensively adopted, but the direct lineage between the Santa Barbara experiment and later plans for providing for individual differences can be implied from the fact that Frederick Burk established the Santa Barbara plan and later started the individual work at the San Francisco State Normal School. Carleton Washburne of Winnetka, Illinois, and Willard Beatty of Bronxville, New York, were associated with Burk at the San Francisco school.

In an endeavor to devise a plan of organization in which a program of studies and instructional procedures, in keeping with the nature of the child, could be carried out effectively, Superintendent William A. Wirt introduced in Bluffton, Indiana, in 1900, what has been known as the work-study-play or platoon school. A general definition of the platoon school would characterize it as a plan of organization which provided for the division of the pupils of the school into two groups, called platoons, and which provided a schedule of classes arranged so that one platoon was studying the fundamental subjects in home rooms while the other platoon was engaged in activity subjects in special rooms.[35]

In 1914 Fredrick Burk, whose name is closely associated with plans for individualized instruction, began his work along this same line. In the San Francisco Normal School, Burk revived the idea of, and put into effect in a very thoroughgoing manner, the Pueblo plan with which Search had struggled. He dispensed with class organization and divided the curriculum into units which

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[35]R. D. Case, The Platoon School in America (New York, 1931) p. 3.

the child should master individually, thus providing a scheme by which the individual child might progress in each school subject as rapidly as his ability permitted. The plan was carried out by giving each child a copy of the course of study for each subject he was to master.

From the influence of Burk came the development of Washburne's individualized instruction techniques which were so famous in Winnetka. In that system however, there was a distinct addition in the social activities which comprised one-half of the day's program and marked a departure from previous plans. The essentials of the Winnetka plan were a division of each morning and afternoon session into two parts; one for individual work in the common essentials, the three R's and similar subject matter; the other part for expressive and group activities.[36]

A still closer approximation of modern grouping was the Detroit X-Y-Z system which was also known as the large school plan. Earlier schemes approached homogeneous grouping, but it was the impetus given by the testing movement that brought homogeneous grouping, as we know it, into the schools. In previous attempts to classify children much individual judgment and many unstandardized measures were used. With the coming of the standardized tests of achievement and of intelligence these formed the basis for separating the pupils into groups. When schools were large enough, as in such cities as Detroit, Baltimore, New York, and Chicago there were enough children in each grade to form three or more classes of each grade. According to the plan the

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[36]Twenty-fourth Yearbook, p. 79.

brightest children were placed in one class, the medium ones in another, the dull in another. Each class did the work of the grade as rapidly as possible. The division was promoted whenever the work of the grade was finished. The main object of this plan was to get closer grading of pupils.

According to the Twenty-third Yearbook of the N.S.S.E. the years just before and after 1900 were very productive of schemes of providing for the individual. The same source suggests that this may be due in part to the active discussions of school grading and promotions at the N.E.A. meetings of those years. However, the discussions must have been due to certain tendencies in education which were concerned with the increased need of individual attention.

An investigation of compulsory attendance laws revealed that between 1880 and 1900, the number of states with compulsory attendance laws increased from eighteen to thirty-one.[37] Also, during these years, the question of child labor received much attention. With compulsory attendance laws forcing children into school, and with child labor agitation to compel them to remain in school, the range of scholastic ability was increased as well as the actual number of children attending school. Many more academic "misfits" had to be provided for when there was no way for them to quit school. Doubtless, the two factors of compulsory attendance and child labor laws have increasingly had much to do with forcing administrators to look for ways of making their school grading more flexible, causing them to revise their promotion policies and to be concerned with the individual needs of their pupils.

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[37]Ellwood P. Cubberly, State School Administration (Boston, 1927), p. 686.

Summary. With the device of homogeneous grouping we have come to the end of a selected list of administrative devices whose number has been legion. Certain of these typical and better known devices have been discussed in this chapter in order that the evolution of ability grouping as employed today may be appreciated.

It is apparent, after studying this array of devices, that every instance in the whole line of schemes follows the same central path toward the greater individualization of instruction; greater concern for the individual pupil.

Of all the experiments that have been made to mitigate the difficulties connected with a graded system of schools, probably the most important as well as the most recent has been the use of scientific measurement to classify students into homogeneous groups on the basis of their ability to do school work.

From the preceding chronological survey of certain typical attempts to adjust the schools to different learning rates and abilities, it might be said that during the score of years following 1860 "individual differences" were realized and the graded school was made the object of concern. In these early years of the 1870's and 1880's may be found the gem of most of the later schemes for providing for individual differences. Though these efforts did not show, as yet, the actual breaking up of the classic organization, there can be found in them many of the essentials of the contract plan, promotion on completion, sectioning and homogeneous and ability grouping. Later attempts which followed the trail blazed by these earlier experimenters accepted their essential point of view, and made provision for individual differences in attempting to provide better and better for each child's needs.

Some of the plans described attempted to adjust schools to individual differences without giving up the traditional class organization. The members of the class kept the same pace; all went through the same grade at the same general rate; there were the usual study and recitation period; there were annual promotions and all the other accompaniments of the traditional system. Yet, some adaptation to individual differences was made and each of these plans was considered an improvement on the unmitigated class system.

However, there also were those educators who believed that the class system itself was a relic of a bygone era when accurate measurement was unknown and the great differences among individuals not yet recognized. To them, to retain the class "lock-step," no matter how changed, was to impede progress and to fail of complete adaptation of schools to individual needs and abilities. A number of these plans were presented; plans which provided for individual progress in the mastery of the common essentials, and at the same time allowed for discussion and group activities for the social aspects of the child's life.

Thus the summary offered here consists of a brief statement of the problems involved in ability grouping, a commentary on types and approaches to grouping as developed over a long period of years; and a summary of the structural organization of the school system of the United States as it has evolved from origins inherited in Europe. In the progress of its development it has reflected changes in American life, changes in the aims and purposes of the school as conceived by succeeding generations, and changes in points of view concerning the extent to which an adequate education should be provided for all, recognizing individual differences.

## CHAPTER III

## AMOUNT AND NATURE OF THE WRITING ON ABILITY GROUPING

Within recent years there has been a decided change in the constitution of an adequate educational program. This was described in detail in the previous section and is further evident in the following discussion. It is the purpose of this chapter to present an overview of the amount and nature of the writing on ability grouping, as found in the selected periodicals, during the span of years encompassed by this study, 1918 to 1960. The frequency of appearance and the content of the articles reflect, it is presumed, an awareness, concern, and interest in this subject by the members of the profession; the reading public of these periodicals.

The total writing comprised 238 articles. Viewed en masse, this volume of educational literature presents certain significant characteristics. The first striking feature of the material is the variation in the number of articles that appeared from year to year. As can readily be observed from Table I, the two peak years were 1920 and 1922. The low years when only one article was found were: 1943, 1944, 1947, 1948, 1949, 1953, 1954, 1960, and 1952 when no writing was found on this subject in these periodicals.

Another outstanding feature, evident from the material, is the constancy of ability grouping as a topic of continuing interest for the writers, and we can presume also for their readers, over the entire span of forty-three years. As is evident from Table II, 185 articles were published during the first half

TABLE I

NUMBER OF ARTICIES BY YEARS

| 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 | 1929 | 1930 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 4 | 23 | 16 | 28 | 12 | 4 | 4 | 2 | 5 | 8 | 5 | 5 |
| 1931 | 1932 | 1933 | 1934 | 1935 | 1936 | 1937 | 1938 | 1939 | 1940 | 1941 | 1942 | 1943 |
| 12 | 9 | 7 | 8 | 3 | 2 | 12 | 6 | 4 | 2 | 2 | 3 | 1 |
| 1944 | 1945 | 1946 | 1947 | 1948 | 1949 | 1950 | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 |
| 1 | 2 | 4 | 1 | 1 | 1 | 2 | 2 | 0 | 1 | 1 | 3 | 4 |
| 1957 | 1958 | 1959 | 1960 | | | | | | | | | |
| 2 | 9 | 10 | 1 | | | | | | | | | |

of this span of years as compared with 53 for the latter portion.

Classification of the articles in terms of the levels of education reveal a second significant characteristic of the volume of writing as a whole. The most prominent feature of the data shown in Table III is the preponderance of the writing on elementary education.

In terms of percentages, the number of articles devoted exclusively to the four levels of education are: elementary education, 53.78 per cent; junior high school education, 8.82 per cent; secondary education, 13.02 per cent; and higher education, 4.20 per cent. The remaining 20.16 per cent were concerned with more than one level or a general treatment of ability grouping. And if we consider elementary education as including the junior high school years the amount of writing on the elementary level is even still greater with 149 of a total of 238 articles. Actually, therefore, more than 62.60 per cent of the

TABLE II

NUMBER OF ARTICLES BY PERIODICALS AND YEARS

Frequency of Appearance

| Periodicals | 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 | 1929 | 1930 | 1931 | 1932 | 1933 | 1934 | 1935 | 1936 | 1937 | 1938 | 1939 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ed | | | | | 2 | 1 | | | | | | | 1 | 1 | | | 1 | | | | | | 6 |
| Ed Adm & Sup | | | 6 | | 2 | 1 | 1 | | | | | | | 1 | | 1 | 1 | | 1 | 1 | | | 15 |
| Ele Sch J | 1 | | 6 | 1 | 5 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | | 1 | 1 | 1 | 1 | 1 | | 3 | 2 | | 35 |
| J Ed | | | | | | | | | | | | | 2 | 2 | 2 | | | | | 1 | | | 7 |
| J Ed Psychol | 1 | | 2 | 1 | 1 | 2 | | | | | | | | | | 4 | | | | 1 | 1 | | 13 |
| J Ed Res | | | 4 | 5 | 8 | 3 | 1 | | | | 1 | | 1 | 2 | 2 | 1 | 1 | | | 3 | | 1 | 33 |
| J Ed Sociol | | | | | | | | | | 1 | | | | | | | | | | | | 3 | 4 |
| Nat Ed Assn J | | | | | | 1 | | | | | | | | | | | | | | | | | 1 |
| Sch & Soc | 4 | 2 | 1 | 2 | 9 | 3 | | 2 | | 2 | 4 | 1 | 1 | | 3 | | 2 | 1 | 1 | | | | 38 |
| Sch Life | | | | 3 | | | | | | | | | | | 1 | | | | | | | | 4 |
| Teach Col Rec | | | | | | | | | 1 | | 1 | | | 3 | | | 2 | 1 | | 2 | 3 | | 13 |
| Sch Rev | | 2 | 4 | 4 | 1 | | | | | | | 2 | | 2 | | | | | | 1 | | | 16 |
| Total | 6 | 4 | 23 | 16 | 28 | 12 | 4 | 4 | 2 | 5 | 8 | 5 | 5 | 12 | 9 | 7 | 8 | 3 | 2 | 12 | 6 | 4 | 185 |

| Periodicals | Frequency of Appearance | | | | | | | | | | | | | | | | | | | | | Total 1940-1960 | Total 1918-1939 | Total 1918-1960 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1940 | 1941 | 1942 | 1943 | 1944 | 1945 | 1946 | 1947 | 1948 | 1949 | 1950 | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | | | |
| Ed | | | 1 | | | | | | | | | | | | | | | 1 | 1 | | | 3 | 6 | 9 |
| Ed Adm & Sup | | 1 | 1 | | | | 1 | | | | | | | | | 1 | | 1 | 1 | | | 6 | 15 | 21 |
| Ele Sch J | 2 | | | | 1 | | | | | | 2 | 1 | | | | 1 | 3 | | 3 | | 1 | 14 | 35 | 49 |
| J Ed | | | | | | 2 | 1 | 1 | | | | | | 1 | | | | | | | | 5 | 7 | 12 |
| J Ed Psychol | | | | | | | | | 1 | | | | | | | 1 | | | | | | 2 | 13 | 15 |
| J Ed Res | | | | | | | 1 | | | 1 | | | | | | | | | | 1 | | 3 | 33 | 36 |
| J Ed Sociol | | | | | | | 1 | | | | | | | | | | | | | | | 1 | 4 | 5 |
| Nat Ed Assn J | | | | | | | | | | | | 1 | | | | | | | 2 | 4 | | 7 | 1 | 8 |
| Sch & Soc | | | 1 | 1 | | | | | | | | | | | | | | | 1 | 2 | | 5 | 38 | 43 |
| Sch Life | | | | | | | | | | | | | | | | | | | | | | | 4 | 4 |
| Teach Col Rec | | 1 | | | | | | | | | | | | | | | 1 | | | 1 | | 3 | 13 | 16 |
| Sch Rev | | | | | | | | | | | | | | | 1 | | | 1 | | 2 | | 4 | 16 | 20 |
| Total | 2 | 2 | 3 | 1 | 1 | 2 | 4 | 1 | 1 | 1 | 2 | 2 | | 1 | 1 | 3 | 4 | 2 | 9 | 10 | 1 | 53 | 185 | 238 |

TABLE III

NUMBER OF ARTICLES BY LEVELS

| Levels of Education | Number of Articles | Percentage of Total |
|---|---|---|
| Elementary Education | 128 | 53.78 |
| Junior High School | 21 | 8.82 |
| Secondary Education | 31 | 13.02 |
| Higher Education | 10 | 4.20 |
| More Than One Level | 48 | 20.16 |
| Totals | 238 | 99.98 |

articles have some direct bearing on the activities of elementary education.

The reasons for this overwhelming interest in elementary education are rather easily determined. They arise from a complex of social and cultural factors of American life that has created within the educational framework a great regard for fundamental education as the bulwark of democracy. A prominent trend in elementary education during the past four to five decades appeared in the growing concern for the individual pupil. Many practices of ability grouping developed that definitely aimed to meet the individual needs of pupils as evidenced in the programs and as reported in these articles. The growth of population and increased democratization of elementary education led to greatly enlarged enrollments and a concentration of pupils which in turn led to the multiplication of elementary schools, most of which continued to be of the graded type. The rise in elementary school enrollment led also to the

multiplication of problems confronting those attempting to provide for individualization of instruction. This made the environment rich for ability grouping as one means of providing for individual differences in the elementary school, which was the first step on the educational ladder. Here the battle was waged over determinism in education, over measurement, and over preserving the opportunities of the common school for every child. The major issue was again the perennial question; whether to group or not to group and on what bases. This was the most frequently discussed issue. Of the 238 articles, 78 referred to this point. The following table shows graphically the emphasis each periodical gave to articles on ability grouping. It will be noted that Elementary School Journal, and School and Society, lead in frequency of appearance.

TABLE IV

NUMBER OF ARTICLES BY PERIODICALS

| | |
|---|---|
| Education | 9 |
| Educational Administration and Supervision | 21 |
| Elementary School Journal | 49 |
| Journal of Education | 12 |
| Journal of Educational Psychology | 15 |
| Journal of Educational Research | 36 |
| Journal of Educational Sociology | 5 |
| National Education Association Journal | 8 |
| School and Society | 43 |
| School Life | 4 |
| Teachers College Record | 16 |
| The School Review | 20 |
| Total | 238 |

Another hypothesis is based on the nature of the magazines for study. Since the large number of articles on elementary education is explained in part by the amount of writing on this level, to the inclusion of the Elementary School Journal, where most of these articles appeared; this greatly increased the number of articles on elementary education. Also included were periodicals of a relatively high universal interest and intellectual level such as the Journal of Educational Research, and School and Society. The data in Table V show that these magazines had a larger number of articles on the elementary level than did all the others. No assumption can be made that a different group of periodicals would have given different results, but in this investigation, the two most popular journals in point of interest on the elementary level account for a major share of the writing on ability grouping. It is interesting to note that since the popularity of the junior high school division wavered over the years this is reflected in the writings and therefore is also evident in this table.

In Table VI, the classification of the articles by levels of education and years reveals another significant aspect: the latter half of the forty-three year period saw a lessening of interest measured by the number of articles, but the ever-present and continuing interest in ability grouping remained. Though concern lagged over the years, as reflected in the number of articles, still only during one year, 1952, was the topic absent from these professional periodicals.

We can readily discern that the period of greatest interest, as revealed through the frequency of appearance of these articles, comes to a rather abrupt end during the five year period 1938 to 1942. From this time to 1960 the

TABLE V

NUMBER OF ARTICLES BY PERIODICALS AND LEVELS

| Periodicals | Elementary Education | Junior High School | Secondary Education | Higher Education | General | Total |
|---|---|---|---|---|---|---|
| Ed | 4 | 4 | | | 1 | 9 |
| Ed Adm & Sup | 8 | 1 | 2 | 2 | 8 | 21 |
| Ele Sch J | 45 | 2 | | | 2 | 49 |
| J Ed | 4 | | 4 | | 4 | 12 |
| J Ed Psychol | 4 | 3 | 3 | 2 | 3 | 15 |
| J Ed Res | 21 | 4 | 5 | 1 | 5 | 36 |
| J Ed Sociol | 2 | | 1 | | 2 | 5 |
| Nat Ed Assn J | 5 | 1 | 1 | | 1 | 8 |
| Sch & Soc | 25 | 3 | 2 | 3 | 10 | 43 |
| Sch Life | 2 | | 1 | | 1 | 4 |
| Teach Col Rec | 7 | | 2 | 1 | 6 | 16 |
| Sch Rev | 1 | 3 | 10 | 1 | 5 | 20 |
| Total | 128 | 21 | 31 | 10 | 48 | 238 |

## TABLE VI
## NUMBER OF ARTICLES BY LEVELS AND YEARS

| Levels | 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 | 1929 | 1930 | 1931 | 1932 | 1933 | 1934 | 1935 | 1936 | 1937 | 1938 | 1939 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Elementary Education | 4 | 1 | 10 | 11 | 15 | 3 | 3 | 4 | 2 | 5 | 5 | 2 | 1 | 3 | 4 | 2 | 4 | 2 | | 10 | 4 | 3 | 98 |
| Junior High School | | 1 | 4 | | 2 | 1 | | | | | 1 | 1 | 2 | 3 | 1 | 1 | | | | | | | 17 |
| Secondary Education | 2 | 2 | 4 | 3 | 3 | 1 | | | | | | 1 | 2 | | 1 | | | | | 2 | 2 | 1 | 24 |
| Higher Education | | | 1 | | 3 | 3 | | | | | | | | 1 | | | 1 | | | | | | 9 |
| More than one level or General | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 6 | 4 | 23 | 16 | 28 | 12 | 4 | 4 | 2 | 5 | 8 | 5 | 5 | 12 | 9 | 7 | 8 | 3 | 2 | 12 | 6 | 4 | 185 |

| Levels | 1940 | 1941 | 1942 | 1943 | 1944 | 1945 | 1946 | 1947 | 1948 | 1949 | 1950 | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | Total 1940-1960 | Total 1918-1960 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Elementary Education | 1 | | | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 2 | | | 1 | 1 | 3 | | 8 | 3 | 1 | 30 | 128 |
| Junior High School | | | 1 | | | | | | | | | | | 1 | | 1 | | | | 1 | | 4 | 21 |
| Secondary Education | | 1 | | | | 1 | 1 | | | | | | | | | | | | 1 | 3 | | 7 | 31 |
| Higher Education | | 1 | | | | | | | | | | | | | | | | | | | | 1 | 10 |
| More than one level or General | 1 | | 2 | | | | 1 | | | | | | | | | 1 | 1 | 2 | | 3 | | 11 | 48 |
| Total | 2 | 2 | 3 | 1 | 1 | 2 | 4 | 1 | 1 | 1 | 2 | 2 | | 1 | 1 | 3 | 4 | 2 | 9 | 10 | 1 | 53 | 238 |

interest was apparent through the presence of articles, but not to the extent as previously evidenced. This is revealed in Table VII.

TABLE VII

NUMBER OF ARTICLES DURING EACH FIVE YEAR PERIOD

| Periodicals | 1918 1922 | 1923 1927 | 1928 1932 | 1933 1937 | 1938 1942 | 1943 1947 | 1948 1952 | 1953 1957 | 1958 1960[a] | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Ed | 2 | 1 | 2 | 1 | 1 | | | 1 | 1 | 9 |
| Ed Adm & Sup | 8 | 2 | 1 | 4 | 2 | 1 | | 2 | 1 | 21 |
| Ele Sch J | 13 | 8 | 6 | 6 | 4 | 1 | 3 | 4 | 4 | 29 |
| J Ed | | | 6 | 1 | | 4 | | 1 | | 12 |
| J Ed Psychol | 5 | 2 | | 5 | 1 | | 1 | 1 | | 15 |
| J Ed Res | 17 | 4 | 6 | 5 | 1 | 1 | 1 | | 1 | 36 |
| J Ed Sociol | | 1 | | | 3 | 1 | | | | 5 |
| Nat Ed Assn J | | 1 | | | | | 1 | | 6 | 8 |
| Sch & Soc | 18 | 7 | 9 | 4 | 1 | 1 | | | 3 | 43 |
| Sch Life | 3 | | 1 | | | | | | | 4 |
| Teach Col Rec | | 1 | 4 | 5 | 4 | | | 1 | 1 | 16 |
| Sch Rev | 11 | | 4 | 1 | | | | 1 | 3 | 20 |
| Total | 77 | 27 | 39 | 32 | 17 | 9 | 6 | 11 | 20 | 238 |

[a]Three year period

The data presented in Table VIII show two things; first, the number of articles written by those authors representing institutions or other educational enterprises located within the respective states; second, that the greater volume of writing came from individuals residing east of the Mississippi. In fact, almost three-fourths of the writing on ability grouping found in these journals was produced by individuals engaged in education, living east of the Mississippi. New York, Illinois, Michigan, Ohio, and California (the only state west of the Mississippi) lead the states in the number of articles, on ability grouping, produced by authors located in the east and Midwest found in the selected periodicals.

A close study of these data also yield the reason for this situation. It

TABLE VIII
AUTHOR BY LOCATION

| State | Number of Articles | State | Number of Articles |
|---|---|---|---|
| Alabama | | New Hampshire | 3 |
| Arizona | 1 | New Jersey | 6 |
| Arkansas | | New Mexico | |
| California | 18 | Nevada | |
| Colorado | 6 | New York | 52 |
| Connecticut | 4 | North Carolina | |
| Delaware | 1 | North Dakota | |
| Florida | 3 | Ohio | 18 |
| Georgia | | Oklahoma | 1 |
| Idaho | 1 | Oregon | 2 |
| Illinois | 25 | Pennsylvania | 10 |
| Indiana | 4 | Rhode Island | |
| Iowa | 5 | South Carolina | |
| Kansas | 4 | South Dakota | |
| Kentucky | 1 | Tennessee | 1 |
| Louisiana | 2 | Texas | 2 |
| Maine | 3 | Utah | 3 |
| Maryland | 2 | Virginia | |
| Massachusetts | 10 | Vermont | |
| Michigan | 20 | Washington | 1 |
| Minnesota | 10 | West Virginia | 1 |
| Mississippi | 1 | Wisconsin | 7 |
| Missouri | 4 | Wyoming | 1 |
| Montana | | Washington, D.C. | 4 |
| Nebraska | 1 | | |

may be recalled that the periodicals selected were those which represent different facets of education rather than location of activity. Since in the East and Midwest there are more institutions of higher learning and more cities big enough to employ a large staff seemingly qualified to write on this topic it does not seem strange that these sections and personnel should predominate. It may also be expected that the vast amount of writing would emanate from these sections over the period of time represented in this study and because of the periodicals selected.

From the data provided in Table IX we see that professors of education and psychology, superintendents of schools, and principals, were the most prolific writers on ability grouping in these periodicals. We can also note that the government agencies, both state and federal, provided little leadership as represented by articles on the subject, in this professional literature. Those individuals employed by public school systems account for the majority of articles. Of course, using frequency of appearance as the single criterion measures merely quantitative rather than qualitative value of the work produced. To clarify these points Table IX page 45 presents this succinctly.

In summary, the literature on ability grouping in this selected list of general periodicals showed the following outstanding characteristics; first, the amount of writing on ability grouping tended to decrease through this period though it remained a constant subject; second, 53.78 per cent of all the articles on ability grouping were concerned exclusively with elementary education; third, whether to group or not to group was the most frequently discussed activity in relation to ability grouping.

These general facts, obtained from a source as prominent in the education field as the leading educational periodicals, provide a new and valid insight into the character of ability grouping, particularly as it is concerned with the progress, problems, and purposes of education.

The major areas of education provide the headings for the separate chapters, in which the writing on the various issues and topics is described. Trends in the volume of writing on each of the issues is observed, but frequency of discussion is but one criterion of significance. When and where

TABLE IX

AUTHORS BY OCCUPATION AND NUMBER OF ARTICLES

| Occupation | Frequency of Appearance |
|---|---|
| Professors of Education<br>Including assistant and associate professors in departments or schools of education | 75 |
| Professors of Psychology | 13 |
| Professors of Educational Sociology | 3 |
| Professors of Social Science | 2 |
| Public School Personnel | |
| Board of Education Member | 1 |
| Superintendents<br>Including assistant and district superintendents | 31 |
| Members of Department of Research | 10 |
| Curriculum Supervisors | 14 |
| Guidance Personnel | 8 |
| Psychological Clinic Personnel | 7 |
| Principals | 27 |
| Teachers | 13 |
| Government Agencies | |
| U.S. Office of Education Staff | 6 |
| State Departments of Public Instruction Personnel | 2 |
| Editorial Staff Writers | 14 |
| Private Educational Agencies | 2 |
| Representatives of Industry | 2 |
| Undetermined | 8 |

the discussion occurred have been taken into consideration. Also, the professional occupations of the authors who wrote on each of the issues have been determined. This information is presented in more detail at the end of each chapter. It is sufficient to say here that most of the writing was done by professors of education, superintendents of schools, supervisors and other staff members of city school systems, principals, professors of psychology, teachers, and members of the editorial staffs of the periodicals.

## CHAPTER IV

## PHILOSOPHY

Let us, before we delve into the organization and classification of the articles on philosophy, turn our attention to a point of necessity; the clarification of terms. Many of the problems and complication involved in "grouping," it appears, would not have occurred if a more precise mode of communication had been extant. Certainly, much of the criticism and confusion over ability grouping would have been lessened. Confusion arises here, as in other fields of human endeavor, from failure of different individuals to use terms in the same sense. Thus ability grouping sometimes means interest grouping, pupil grouping, or grade grouping, to name only a few. Similarly, ability grouping is sometimes used synonymously with homogeneous grouping, whereas at other times the two terms are carefully distinguished.

All of the definitions given in the periodicals certainly can not possibly be restated here but just a few of the more popular, set forth by specialists, need be used to show the variations of meaning. A good example is this statement by Otto, who has written many articles concerning "ability grouping, or the practice of segregating children into groups according to ability, which has been introduced so extensively that the term 'homogeneous grouping' has become common parlance."[1] From this statement we note one point of conflict, in the

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[1]Henry J. Otto, Elementary School Organization and Administration (New York, 1944), p. 149.

synonymous use of ability grouping and homogeneous grouping, which is characteristic of much of the writing. Harold Shane is also an example of a writer who does not distinguish between the two terms. Writing in the Phi Delta Kappan as late as 1960, he mentions, "homogeneous grouping also known as ability grouping" in this similar fashion.[2] Even the Education Index, which was used for the selection of the articles, uses the two terms interchangeably. One mark though, which is unique with the Index, is that as far back as 1927 ability grouping was listed as a subtopic whereas most of the writers in the field were still considering homogeneous grouping as inclusive of all types of grouping. It was not until many years later the term ability grouping was evident in a consistent manner in the periodicals.

One of the chief issues is the failure to distinguish between the two distinct types of grouping indiscriminately known both as homogeneous and ability grouping. Homogeneous grouping attempts a finer classification than is afforded by grades and the apparent aim of this type of grouping is to secure greater achievement in traditional subjects, whereas ability grouping has a broader purpose. To analyze this further Warren Coxe helps to clarify the meanings by presenting a succinct statement underlining the difference between ability grouping and homogeneous grouping. He states "that the point of differentiation between homogeneous grouping and ability grouping is that the former is looked upon as a devise for improved achievement in certain standardized subject matter, whereas the latter is for the purpose of

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[2]Harold Shane, "Grouping in the Elementary School," Phi Delta Kappan (April 1960), 321.

developing certain more general abilities, and that subject matter is used merely as a means to this end."[3]

The Encyclopedia of Educational Research states what appears to be the opposite view in holding that, "ability grouping is an extension of grading or a refinement of homogeneous grouping. It is usually the separation of children of a given grade into two or more grades or classes, the members of each group being more alike in a particular ability than the entire group together. Theoretically ability grouping presumes grouping in relation to ability to attain in a single subject or activity."[4] It is important therefore to recognize that ability has been conceived not as general ability but as academic ability. A group of pupils commonly has been considered as being homogeneous if it were somewhat homogeneous in only this one aspect--scholastic ability. This may seem to be a minor distinction but it is a philosophically fundamental issue for it presupposes different educational purposes.

Otto further defines ability grouping as, "the practice of segregating the children of a given grade or age group into groups according to ability."[5] This resembles Rankin's idea of ability grouping which means "that organization of schools in which pupils are classified for purposes of learning and teaching into groups which are relatively homogeneous with respect to one or more

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[3]Warren W. Coxe, "Our Homogeneous Ability Grouping Confusion," Journal of Educational Research XXV (January 1932), 5.

[4]Walter S. Monroe ed., Encyclopedia of Educational Research (New York, 1950), p. 377.

[5]Otto, p. 151.

significant characteristics. Ordinarily it includes not only reclassification of the pupils who have been gathered in a given grade into groups of greater homogeneity but also an adjustment in content and method to the differences among the groups thus formed."[6]

This definition alone indicates an intrinsic progression in the development of ability grouping. The first studies were concerned merely with placing the pupils in instructional groups. At that time it was believed by that fact alone improvement would occur. It was not until many experimental investigations later when it was recognized that "an adjustment in content and method" was an imperative accompaniment to secure positive changes. Thus by definition of ability grouping one may have some indication of the educational philosophy of the particular individual.

Therefore, though we may define for our purpose ability grouping as explained by Coxe, we must remember we are dealing with much literature that does not distinguish between the terms homogeneous grouping and ability grouping. We must, therefore, because of the necessity of completeness of this research analyze the articles with this lack of distinction in mind, but with his definition as a frame of reference and the several various definitions as knowledge to assist in the clarification and analysis of the literature.

Having cleared the way through this labyrinthian path of definitions, we now can more clearly study the other philosophical aspects of ability grouping, as found in the professional literature. When there is so much confusion in regard to the use of the term "ability grouping," it is not surprising that

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[6]Paul T. Rankin, "Pupil Classification and Grouping," Review of Educational Research, I (June 1931), 200.

there should be further confusion in regard to many of the issues in it. In a society committed to equality of educational opportunity, ability grouping is a controversial subject. Philosophically, objections to ability grouping center on the proposition that it is undemocratic to single out any one group in the educative process.

Douglas Lawson, of Southern Illinois University at Carbondale, in a very practical and unsophisticated statement sums up an essential consideration in grouping by emphasising that homogeneous grouping is not necessarily undemocratic. Rather, he states

> democracy in education means, or should mean, provision for each child to achieve at his own best level in accordance with his own individual potentials. It is no more 'democratic' to consider all children as having equal learning capacities and mental potentials than it would be to insist that all children have feet of the same size and must be given shoes that are exactly alike. It is true, and all major research supports the statement that children are born with different physiological, emotional and mental potentials; and just as it is essential that each child have shoes that fit him, also it is essential that educational requirements be tailored to his capacities. Homogeneous grouping actually is an attempt to recognize each child's democratic right to an education that will help him individually to achieve his own maximum of self-realization, happiness and effective growth. Homogeneous grouping is the very antithesis of an autocratic regimentation and an imposed uniformity. . . .
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> The very heart of democracy in education is in the determination to measure each child's weaknesses and strengths and to see that the requirements and opportunities are consistently tailored to his needs.[7]

Warren W. Coxe also adheres to these principles and maintains "that, from

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[7]Douglas E. Lawson, "An Analysis of Historic and Philosophic Considerations for Homogeneous Grouping," Educational Administration and Supervision, XXXXIII (May 1957), 257-270.

the standpoints of the history of the democratic idea and of the philosophy of democracy, grouping of pupils and individualized instruction have ample warrant. In fact, a failure to conduct education in such a way as to allow freedom of individual development would be a disregard of democratic principles."[8]

This debate never has been resolved completely and just to show that it is still timely and still cropping up in the literature as a point of discussion though with a little different emphasis we cite the following article. As recently as, May 1959, Father Charles Donovan, Dean of the School of Education at Boston College in referring to the National Defense Education Act of 1958 because of its provisions for counseling and testing services states, "there is no question that. . . the legislators who passed this act were concerned with identifying and aiding gifted young people. But appropriate testing and guidance are as beneficial to the non-gifted as to the gifted. May it not fairly be said that the guidance and measurement movements in America are the schoolman's counterthrusts to educational, environmental, and economic determinism."[9]

A related objection stems from the ideal flexibility of our society and our belief that any man can do or be anything that he works to be, regardless of his background or wealth. Detractors of ability grouping fear that the

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[8]Warren W. Coxe, "Social Problems and Pupil Grouping," The Grouping of Pupils, Thirty-fifth Yearbook of N.S.S.E., Part I (Bloomington, 1936), p. 12.

[9]Rev. Charles F. Donovan, S.J., "A New Era for Guidance," School and Society LXXXVII (May 23, 1959), 959.

separation of students on the basis of various talents is a deterrent to equal opportunity for success.[10]

Although many of these ideas are inextricably interwoven with the discussion about the psychological aspects and curriculum adjustments necessary to implement them, an effort has been made to classify them separately. In some instances the writing does not lend itself to such definite classification, and no effort has been made to force it into any one of these categories. Therefore, a further treatment of this discussion on the controversial aspects of educational determinism will be given in Chapter V.

One of the most comprehensive studies of homogeneous grouping was made by Alice V. Keliher in 1931. Her plea, reinforced by her interpretation of John Dewey's philosophy, was to consider the whole individual and offered homogeneous grouping as the solution for providing for "the realization of individual differences in the total personality sense."

Keliher discusses what she terms "the various means which have been instrumental in perpetuating a partial concept of the individual," the limited subject matter concept of individual differences, and therefore, "a partial concept of individual differences" and blames William T. Harris for this academic condition."[11] Criticism is heaped upon him for his influence on

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[10]Austin H. Turney, "The Status of Ability Grouping," Educational Administration and Supervision, XVII (January 1931), 21-42 and (February 1931), 110-127.

[11]Keliher, 32-42.

educational thought through both his professional work and his philosophy concerning the individual. This is an important consideration to Keliher because she believes much of the same and limited educational philosophy as that of Dr. Harris is still evident in the schools and therefore a deterrent to the "total personality."[12]

To understand this criticism we must remember that Dr. Harris was the superintendent of schools in St. Louis, and also United States Commissioner of Education, as well as the guiding light of the Concord School of Philosophy.

Butler, in classifying the idealists, states that "William T. Harris it can justly be said was the fountainhead of the American Idealist movement."[13] Which means he was a disciple of Hegel and to better understand the conflict between the Keliher-Dewey view of education and the Harris-Hegel beliefs we must refer to the idealist principles concerning education. For example, the idealist's concepts of the curriculum is that "there must be much objective content and much book learning if there is to be solidity in education and students are to have a rugged mental diet."[14] Of course, with Keliher's concern for the whole child, this was in opposition. But, in a way, Keliher is unduly critical of Harris because the idealist also believes that the curriculum "must go beyond books and subject matter to include direct experimental relation with actualities."[15] She is correct though because in practice

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[12] Ibid., 32.

[13] J. Donald Butler, Four Philosophies, (New York, 1951), p. 159.

[14] Ibid., 247.

[15] Ibid., 247-248.

his schools were highly subject-matter oriented.

It is important, therefore, in evaluating plans for grouping that the objective sought be kept in mind. This objective as expressed by Heyl is, "to place each child in an educational setting which affords him an optimum, well-rounded opportunity for learning, without hampering his physical and social development or his emotional adjustments."[16] Many of the authors of these articles would claim allegiance to this statement but disagreement arises when attempting to organize a program to provide for these principles.

One of the chief problems in finding the criterion or the best criteria for ability grouping has been the question of predicting achievement and success in school. In the past the predominate aim of ability grouping has been to improve the learning situation by grouping pupils who will be alike in achievement at the end of a period of learning. This is complicated by such factors as motivation, industry, perseverance, past experience, ambition, ability and achievement as well as curriculum and methods of instruction.

If we assume that the aim of ability grouping is developmental in nature, that is, to bring together pupils who will be able to work together and to progress together under conditions permitting the fullest possible development of the individuals involved, then one is less concerned with prediction and more with the developmental aspects of ability grouping. Again if we presume that this concept of grouping is valid the school must assume responsibility for such factors as motivation and discrepancies between the child's ability to learn and

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[16] Helen H. Heyl, "Grouping Children for Instruction," The National Elementary Principal, XXXVIII (December 1958), 6.

his actual learnings.

A sign of the times, once again, is evident in the recent articles that in many respects is a revival of these same essential considerations of grouping. Professor Lawson suggests that the reason for renewed interest in grouping today perhaps may be caused by the schools being faced with the desperate need to cultivate the talents of its superior students.[17]

We are still hearing rumblings that grouping is undemocratic and as a further and even more timely comment Bruno Bettleheim, in his article, "Segregation: New Style," accuses the proponents of ability grouping of fostering segregation, which term in 1958 has a different and caustic connotation than when used in the literature in previous decades.[18] Lacking in progress as this may seem he is not alone in this view. Woodring emphasizes, this is consistently revived.[19]

Many critics condemned not merely the intelligence test but tests per se because they viewed such tests as instruments designed to destroy the democratic concept of equality among children. In addition it was claimed that grouping would make snobs and social misfits of the gifted children and would leave them unprepared for life in a situation where they would be forced to operate in a heterogeneous world.[20]

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[17]Lawson, 257.

[18]Bruno Bettleheim, "Segregation: New Style, The School Review LXVI (Autumn 1958), 251-272.

[19]Paul Woodring, "Ability Grouping, Segregation and the Intellectual Elite," School and Society, LXXXVII (April 11, 1959), 164-165.

[20]Turney, 20.

Opponents of grouping claim that it is another form of educational determinism because they see it as a system which permanently assigns a child to a specific classification from which there can be no escape. Whereas, in actuality, flexible placement is practiced and highly advocated by those fostering ability grouping.

Discussions sometimes ignore the extent to which "homogeneous" grouping exists and has existed in practice. The elementary and secondary schools are vivid examples. The separation of pupils into elementary and secondary schools represents an attempt to place together those pupils of like ability. A further extension of this organization is the separation of children into grades and the further separation into lower and higher sections within a grade represents "homogeneous grouping." It seems clear therefore that some degree of homogeneous grouping is used universally in the American schools.

It is the synonymous use of the terms "homogeneous grouping" and "ability grouping" which creates much of the confusion.

Some of the critics apparently are seeking perfection and hence it should be clarified that the term homogeneous grouping does not imply that children are identical. It merely implies that they are somewhat alike, that their abilities and talents are "commensurable" or that their potentials are highly similar.

Another critical article is presented by Brink who is opposed to ability grouping on "five counts," which include the criticisms of many of the other authors. The first objection is in regard to the "statistical invalidity" of dividing a normal group into three parts. The second is the administrative difficulty involved in the organization of ability grouping. The third point

of disagreement is the unsatisfactory criteria of selection; the fallibility of tests. The fourth point is in reference to providing adequate curricular adjustments. The last objection mentioned is a rather theoretical one.[21] Brink says it is "unfair to the slow pupil to give him the experience of comparative success which can not be continued after school days are over."[22] One cannot help but wonder at such thinking. Does the author desire the schools to prepare the slow pupil for the habit of failure?

In a rebuttal to Brinks' article listing the disadvantages of ability grouping, Otis states the prime purpose of ability grouping "is to adjust the instruction of the bright and of the dull pupils more nearly to their capacities as to rate of progress or breadth and intensity of the work or both."[23] The main concern of Otis is not provisions for the gifted or even the bright pupil but rather "that the dull pupil should succeed at something rather than fail because of attempting too much."

Problems which arise from ability grouping are numerous, much more numerous than those involved in homogeneous grouping since new principles are involved concerning which there is no universal agreement at the present time. The writing in the periodicals recognized these complications and the confusion involved in ability grouping.

Not all the periodicals published articles on the philosophical aspects of ability grouping. The Journal of Educational Research and School and

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[21]Laurence B. Brink, "The Fallacy of Ability Grouping," School and Society, XXXV (March 26, 1932), 427-429.

[22]Ibid., 428.

[23]Arthur S. Otis, "Ability Grouping," School and Society, XXXVI (July, 1932)

Society published the greatest number of articles.

Professors of education were responsible for more of the writing than any other group, superintendents of schools ranked second, research directors of city school systems ranked third, while principals and graduate assistants in departments of education were fourth. A member of a state department of education was also represented in these writings on philosophy.

This chapter on the research in ability grouping presents an analytical summary of the data on the writings regarding philosophy. Following a brief statement concerning the numerous definitions of ability grouping, the various articles with philosophical import are discussed. The common issues and debates of ability grouping and evidence as to their relative effectiveness in determining policies and practices is presented. Finally, attention is given to the background of the authors of these articles and to the periodicals which published the articles.

# CHAPTER V

## PSYCHOLOGY

Three basic psychological assumptions underlie the concept of ability grouping. The first and most important is that children differ greatly among themselves, even among those of like age and sex. Actually, this assumption rests upon considerable factual evidence now, and is no longer disputed by many authorities.

The second assumption is that although the differences among individuals are large, they may be classified into groups within which the individual differences are relatively insignificant but between which the differences are large and significant.

The third assumption is that the changes in children at which the school aims occur in greater degree and with greater certainty or with greater ease of instruction where the children work in ability groups than when they work in heterogeneous groups. That is, other things being equal, the instructional process is assumed to be more effective and more efficient in a system employing grouping by ability than in a system where such grouping is not practiced.[1]

The writings in the periodicals reflect these assumptions. Though it might seem to be an over-simplification to state that this latter assumption is

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[1]Rankin, 200-202.

subject to proof of experimental study, by the comparison of the growth of pupils taught in ability groups with the growth of similar pupils taught in mixed groups, we shall pursue this point of view through the writings on ability grouping in relation to psychology.

Back in 1922 an interesting but also vituperative exchange of scholarly verbal barbs ranged in the educational world between two distinguished professors. In a way, this "debate" began simply enough with the address by Professor Bagley of Columbia, before the Society of College Teachers of Education, February 27, 1922, here in Chicago. This speech was, in substance, a strong plea against classifying or instructing pupils according to their I.Q. as yielded by mental tests.[2]

The keynote of Dr. Bagley's argument was that the psychologists who were promoting the intelligence testing movement were fatalists; that they exaggerated the factor of native endowment; that they were more interested in labeling stupidity than in curing it; that their doctrines lead inevitably to the neglect of average and inferior children and to an undemocratic emphasis on training the gifted; that their results were an excuse for limiting the education of the masses to narrow vocationialized courses; and finally, that the entire movement, founded upon little but psychological fallacies was subversive of American ideals of democracy.[3]

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[2]William C. Bagley, "Educational Determinism or Democracy and the I.Q.," School and Society, XV (April 8, 1922), 373-84.

[3]Ibid.

In response to the rather pompous style of Dean Bagley and in total disagreement with his tenets, Professor Terman, of Stanford, replied in a rather unique fashion to Bagley's "rhapsodic peroration. . . on the ultimate illumination of the world by gleams of light struck from dull minds."[4] But Bagley in turn claimed "it is the light that is let into common minds that will illuminate the world if anything does."[5] Terman frequently pleaded for less emotion in Bagley's arguments and more scientific appraisal. Therefore, in the concluding paragraph Proffesor Terman remarks, "In general, if one would know what the author's data really show it is always necessary to determine this for one's self from his tables of results. His own conclusions are so often either contrary to his facts or else irrelevant to them that verification is always necessary. One is tempted to offer the injunction caveat lector."[6]

The two professors went on, each in his own way, to set up two quite separate and divergent arguments against each other and at times became scathingly critical of each other's means of arriving at what each thought were valid conclusions. Professor Terman continues his retort with a sneeringly sarcastic reply that "of course it is unfortunate . . . the I. Q. does not enable us to diagnose psychopathy, epilepsy, enuresis, etc., or to tell us whether the subject has or has not found the appropriate conditioned reflexes.

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[4]Lewis M. Terman, "The Psychological Determinants; Or Democracy and the I.Q.," Journal of Educational Research, VI (June 1922), 57-62.

[5]Bagley, School and Society, XV, 382.

[6]Lewis M. Terman, "Mental Growth and the I.Q.," Journal of Educational Psychology, XII (September 1927), 341.

For such purposes, one is bound to admit the I.Q. is distinctly fallible. It might be well to warn astronomers that there may be similar limitations to its usefulness in the prediction of eclipses!"[7] Though this article actually refers to the problems relating to native mental abilities and to the developmental changes which come with increasing maturity Terman strayed from the issue to include the retort. This was typical of their discussions. One certainly cannot say that the "doughty opponents" were always without rancor.

In his answer to Terman, Bagley states as the fundamental question at issue, "the possibility of developing through educative and other environmental agencies the traits that the determinists assume to be both native and essentially unmodifiable."[8] A distinction is made between "vertical" growth and "horizontal" growth by Bagley, who accepted as a hypothesis the probable existence of certain biological traits underlying and conditioning mental growth. In answer to Terman's criticism of his address Dr. Bagley counters with:

> I assumed that the structures and functions constituting these biological traits were subject to the biological laws of variation and growth. In respect to their growth, I assumed that they matured fairly early in life. . . . the sum of these traits makes up the hypothetical entity that the determinists call "general intelligence." Whatever mental development may be due exclusively to the natural maturation of the structures and functions presumably underlying general intelligence I termed, for convenience, "vertical growth." With it I contrasted the mental development that comes from the acquisition and organization of experiences, whether gained

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[7] Ibid., 405.

[8] William C. Bagley, "Professor Terman's Determinism: A Rejoinder," Journal of Educational Research, VI (December 1922), 374.

directly from adjusting to actual situations or indirectly through a mastery of the social heritage. This variety of mental growth I characterised as horizontal.[9]

As is evident from this writing and the following statement Professor Bagley is a proponent of the culture-nurture school whereas Professor Terman is pro heredity-nature. Professor Bagley continues to clarify his stand and maintains if, as Professor Terman insists, "intellectual activities are pretty largely determined by native endowment it seems equally true that general intelligence took an unconscionable long time in getting into action and the suspicion is aroused that present-day psychology is ascribing vastly more significance to nature and far less significance to nurture than the facts warrant."[10] And on the discussion proceeded, with others, of course, coming into the fore to place their ideas and comments and then retreat. Truman Kelley gives a humorous indication of the heights of popular sentiment to which this debate grew when he mentions "it is with ardor that I open my educational periodicals and hasten to see if Bagley or Terman or lesser lights have a contribution upon Democracy and the I.Q."[11] He continues and in a way, a bit with tongue in cheek, summarizes a facet of this discussion in stating that, "I find myself in sympathy with Bagley's belief in democracy and with Terman's insistence upon the reality and consequence of innate and acquired individual differences. It is not my purpose in writing this article to attempt to mediate

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[9] Ibid., 372.

[10] Ibid., 379.

[11] Truman L. Kelley, "Again: Educational Determinism," Journal of Educational Research VIII (June 1923), 10.

between such doughty opponents. It is both safer and more in harmony with my beliefs to take one side."[12] The side he takes is definitely in the middle! Since his conclusion is that "instruction should be properly differentiated," he placates both sides.[13]

Frederick Breed enters the fray with a general discussion listing a number of principles, cautions, conditions and steps in using intelligence tests. The conclusion to be drawn is that although intelligence tests results are important the will and the emotions are also important factors but the achievement secured must be the final determining factor in classifying student.[14] Another strong reply to Bagley's address is presented by Guy Whipple in an article in which the validity and use of intelligence tests are strongly advocated.[15]

But the debate continued on with Professor Bagley using his editorship of School and Society as his microphone to question the use of intelligence tests to determine classification and to further his arguments against their use.[16]

In that day this was a highly controverted question and occupied much of the interest and literature of the time and though one cannot justly set a date and say that was the day this question was resolved we can from the

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[12] Ibid.

[13] Ibid., 19.

[14] Frederick S. Breed, "Shall We Classify Pupils by Intelligence Tests,? School and Society, XV (April 15, 1922), 406-409.

[15] Guy M. Whipple, "Educational Determinism: A Discussion of Professor Bagley's Address at Chicago," School and Society, XV (June 3, 1922), 599-602.

[16] William C. Bagley, "Educational Determinism Again: A Rejoinder to Professor Whipple's Reply," School and Society, XVI (August 5, 1922), 1141-1144.

vantage point of 1960 state that it no longer is as greatly contested. Because of the many as yet unsolved problems in connection with the measurement of intelligence, it is still not possible at the present time to give a definitive appraisal of the nature-nurture problem, yet in the light of recent studies which suggest the potentialities that might be realized through nurture are possible and certainly greater than had been supposed during the Bagley-Terman discussion. Actually, what then appeared to be two distinct and irreconcilable views have through the years of continued study and experimentation moved considerably closer to each other, each in a way was right; each in a way not completely correct. In view of what we know today the intelligence quotient is modifiable and individual differences are evident and accepted though we are still battling a bit over "democracy and the I.Q."

Aside from the psychological implications of this debate, the writing centering around the field of psychology is mainly concerned with measures to be used for the bases of grouping. These start with Pressey's attempts at the correlation of health, "school attitude," preparation, and ability, with school marks and age of junior high school pupils. Ability and attitude were found to be most important for placement.[17]

Through the questioning of tests of intelligence as to their character as well as use these articles impress the reader that we have progressed in

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[17]S. O. Pressey, "An Attempt to Measure the Comparative Importance of General Intelligence and Certain Character Traits in Contributing to Success in Schools," Elementary School Journal, XXI (November 1920), 220-229.

education. Mental tests and other measures of individual differences are taken today as an integral part of our educational endeavors, whereas many of these articles show questioning of these procedures.

From the beginning of the testing movement until the present day, scores on intelligence tests have been the basis of grouping which has been most widely discussed and perhaps most generally used. But an indication of the unsophisticated level at which intelligence tests were first thought of is given by Warren Layton of the Detroit public schools in describing the means used to classify their pupils in the X-Y-Z groups. He emphasizes that, "Many school people now believe that education could be made more effective if there were available a means of classifying pupils on the basis of mental ability."[18]

A few of the measures used and recommended for bases of grouping are the following intelligence tests: the Myers Mental Measure, Freeman-Rugg General Intelligence Tests, Otis, the Binet and Stanford Revision of the Binet, Henman-Nelson, Cole and Vincent, Haggerty, and Terman. The achievement tests were: Gates Basic Reading, Stanford Spelling and Arithmetic, and Stanford Achievement in Reading. Just listing these tests gives some insight into the searching for appropriate measures to be used for establishing bases for ability grouping. As tests proved they were a better means of classifying children there were many comments. In casting aside classification based on birth date as the sole determining factor a Wisconsin school superintendent is quoted as

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[18]Warren E. Layton, "The Intelligence Testing Program of the Detroit Public Schools," School and Society, XV (April 1, 1922), 368-372.

humorously saying, "I am through with the 'stork method' of entering beginners in classes."[19] In the same article Luella Cole, in giving an account of the use of Binet and the Cole and Vincent group intelligence test advises the mental age for classification. She maintains the law is wrong in assuming that six year old children form even an approximately homogeneous intellectual group because there is a great difference between the best and the poorest entering first grade. She found an average difference of more than a year of mental age between the superior and inferior halves of beginning classes.[20]

Cook, of the University of Minnesota, has done much work on mental age as a basis for grouping. His experimentation shows that ability grouping based on the mental ages of pupils reduces the range of their abilities in a school subject to "a rather small extent." Cook found that when pupils are grouped into X, Y and Z sections their range of variability in a particular subject is less than formerly by about 25 per cent. Instead of a range of eight years in reading ability at the sixth grade level after grouping, the teacher has a range of 6.4 years. In other subjects such as art, music, handwriting, and mechanical drawing, the reduction of range approaches zero.[21] In view of these findings he points out that every teacher soon learns that the pupils in a class differ from one another in every conceivable way and to provide for these

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[19]Luella W. Cole, "Prevention of the Lockstep in the Schools," School and Society, XV (February 25, 1922), 212.

[20]Ibid., 212-217.

[21]W. W. Cook, Grouping and Promotion in the Elementary School, (Minnesota, 1941), pp. 30-33.

individual differences he advocates grouping. He maintains that "stripped to its essentials . . . instruction in groups can proceed most effectively only when each group consists of individuals at the same stage of learning in the material being covered. . . . Grouping for effective learning is clearly recognized as essential."[22]

Not many of the articles refer to bases for grouping at the college level though early in this period Seashore describes the placement examinations formulated at Iowa State University. Seashore strongly advocates the use of placement examinations in sectioning university and college classes.[23] His belief is that the college placement examinations with logical adjustment based on them, furnish for higher education the most effective principle of recognizing the individual and that "the principle of recognizing the individual is the foremost contribution that modern psychology has made to education."[24]

Some of the studies indicate but do not prove how ability groups compare with unselected groups in certain respects. For example, an extensive study was made by Parl West to determine the extent to which ability grouping reduces the variability in educational achievement of classes. Scores on standardized achievement tests were examined for 4,743 pupils in the intermediate grades of eight different schools which practiced ability grouping. One conclusion was that ". . . the 10-90 percentile range in achievement of ability groups, in

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[22]W. W. Cook, "Individual Differences and Curriculum Practices," Journal of Educational Psychology, XXXIX (March 1948), 143.

[23]C. S. Seashore, "College Placement Examinations," School and Society, XX (November 8, 1924), 575-578.

[24]Ibid., 577.

grades which have three groups each, is about 82 per cent as great as in unselected groups."[25] This is just one example of the conclusions derived but the findings indicate, but do not prove, how ability groups compare with unselected groups in certain respects because the pupils were actually taught in ability groups and not in unselected groups.

In addition, this study also brings to mind other and more fundamental questions. If ability grouping reduces variability in educational achievement, is this a desirable outcome? Is the reduction in variability of educational achievement an objective of our instructional program? Partially, in answer to this we refer to Cook's treatise on "Measurement in the Facilitation of Learning" which summarizes the rather contradictory research on these questions.[26] In answering he phrases concomitant questions "Are individuals more alike or less alike with respect to a given ability after a period of instruction? Does good teaching increase or decrease the variability of a class? To come to a satisfactory conclusion, Cook proposes that the following generalization seems warranted "if the responses to be learned are sufficiently simple and the goals that have been set up so limited that a high proportion of the group can master them during the period of learning, the variability of the group becomes less; if the task is complex and the goals unlimited, so that the abilities of the most apt members of the group are taxed during the period of

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[25]Parl West, "A Study of Ability Grouping in the Elementary School," Teachers College Record, XXXV (February 1934), 417-418.

[26]Walter W. Cook, "Measurement in the Facilitation of Learning," Educational Measurement, ed., E. F. Lindquist (Washington, D.C., 1941), P. 3-46.

learning, the variability of the group increases."[27]

In this regard Carroll poses a similar question concerning the length of time the group will remain homogeneous. As time goes on will the individuals in the group become more and more alike or more and more unlike in ability or skill? From his experiments at Syracuse University with groups that were "comparatively homogeneous at the outset" the results showed an increase in homogeneity. The experiments involved a rather simple drill which resulted in members of the group either remaining homogeneous or becoming more and more alike in their achievement.[28] This report is introduced here because these findings are typical of those resulting from seemingly incomplete experimental design. Therefore, the conclusions do not warrant very serious consideration and leaves the problem for more thorough investigation.

An interesting though contradictory conclusion resulted from an experiment to determine the relation between group achievement and ranges of abilities within the groups. The fifth and sixth grades of four elementary schools in Hamilton, Ohio, were selected for the study. There were 462 pupils in sixteen class groups. The same teacher taught reading to the two fifth and two sixth grades in each school. Grouping had been practiced, based upon the results of the Henman-Nelson Intelligence Test. This same basis was continued, but in each grade in each school two groups were established with variations in the range of I.Q's. These groups were designated the wide and narrow range groups. Since a high and a low group was formed in each grade, the variations in range were

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[27]Ibid., 21-22.

[28]Robert P. Carroll, "The Effect of Practice on the Homogeneity of a Group," Journal of Educational Psychology, XXIII (September 1932), 462-464.

adjusted to make eight wide and eight narrow range groups; two of each for each teacher. "Class size was equalized as nearly as possible."[29] The average intelligence of the wide range group was 104.7, of the narrow range group 100.4.

Achievement in this study was in reading as measured by the Stanford Achievement Tests. Reading progress in months for the six month period of the study was recorded for each pupil. The average of the progress in months resulted in a critical ratio of 4.33 favoring the wide range group. The conclusion reached was "with the elimination of slow learners and with the measures and teachers used, the results indicated better reading achievements in groups with an average range of I.Q.'s of 40 points than in groups with an average range of 30 points."[30]

The claim is made that the slow learners were eliminated, yet it is reported that some I.Q.'s of below 75 were somehow still retained in the wide range group and one in the narrow range group. Nothing conclusive can be derived from this study but it has been emphasized here because it is one of the more recent studies and because the experimental design shows improvement over the years, though yet not perfected.

The writings of Professor Symonds alone constitute a kind of chronological summary in the development of ability grouping. At first, he advocated the use

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[29]R. W. Edmiston and J. G. Benfer, "Relationship Between Group Achievement and Range of Abilities Within the Group," Journal of Educational Research, XXXXII (March 1949), 547-548.

[30]Ibid., 548.

of tests to measure progress and potential.[31] Then after tests were established as accurate measures, new, more refined, techniques for utilizing the results of tests occupied his attention.[32] Now more than a quarter of a century later his writings indicate that he takes these for granted and again calls our attention to the extent of individual differences and the responsibility of the schools and the teachers with respect to them.[33]

The authors of these articles represent every level of education except teachers at the elementary and senior high school level. Superintendents, supervising principals, grade level supervisors, and junior high school teachers represent the public schools as well as vocational and placement counselors in the schools, and personnel of the research and guidance bureaus of central administrative offices. Psychologists from state departments of education, the federal office of education, and diagnostic clinics of public school systems also produced their share but, by an overwhelmingly number, most of the writing was produced by associate professors of education, attached to departments of education of major universities.

Most of the writers are one or two article authors writing about a particular plan or recommendation but some of the "professionals," names of

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[31]Percival M. Symonds, Measurement in Secondary Education, (New York 1929), p. 309-319.

[32]Percival M. Symonds, "Shall the I.Q. Be Used for Sectioning in the High School," Journal of Educational Research, XXIV (September 1931), 311-319.

[33]Percival M. Symonds, "What Education Has to Learn from Psychology," Teachers' College Record, LXI (November 1959), 86-98.

individuals who have remained or grown in prominence in education, through the years are Luella Cole, Breed and Breslich from the University of Chicago, Seashore, Symonds, and Warren Coxe of N.S.S.E. notability and certainly Terman.

Teachers College, Columbia University, had the greatest number of articles in this field regarding the psychological aspects of grouping.

In the light of the above discussion it is difficult to formulate a summary of the outcomes of the studies represented. So much is included that is fundamental; so much is involved. Though numerous bases as criteria for grouping have been proposed and reported upon here none has been developed to answer all the problems proposed by ability grouping. But through the Terman-Bagley "debate," the other discussions of philosophical issues and the experimental research published in these articles we have been able to realize that we have moved closer to the goal of adequate provision for individual differences. Lastly, the amount of writing published in the periodicals was treated briefly as well as data regarding the authors of this writing on the psychological aspects of ability grouping.

# CHAPTER VI

## ADMINISTRATION

In the administration of ability grouping, as in all school administration, organization should aim at pupil welfare rather than ease of administration. This may be considered as a foregone conclusion but still some writers point out that ability grouping should not be attempted, and in a few cases was being terminated because of the added burden of administering the program.[1]

One of the major problems of education has been to discover what method for the classification of pupils would prove to result in the greatest possible gains for the students and, at the same time, facilitate the best techniques of teaching. In regard to this, interest developed in the possibility of dividing classes into groups of more homogeneous nature, with the grouping usually done on the basis of some measure of intelligence or general ability. During the 1920's and early 1930's especially, considerable interest was shown in this problem and many studies relating to it were made as was shown in the previous chapters. Here, the emphasis will be upon the articles dealing with the administration of the programs of ability grouping and the problems connected with this aspect.

Among the first articles to use the term ability grouping was a report

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[1]Brink, p. 429.

written by Glass, in 1920. It was a description which attributes some rather infrequently mentioned administrative advantages for this type of grouping. In summary, he views ability grouping as an administrative resource to promote the fundamental purposes for which the junior high school was established. Since it demands a recognition of individual differences it facilitates administrative plans in the adaptation of the curriculum requirements to individual differences and since it serves to prevent "mental discontent" it becomes one of the main factors in the prevention of elimination from school. Note the concern was to prevent elimination from school rather than a problem of retardation in school. Finally, with a last flourish Glass sees "ability grouping as an assurance of individual justice and . . . an educational square deal."[2]

Ability grouping had been tried in many schools and when it appeared to be growing in popularity, at all levels from the elementary schools through the college, an opinion survey was undertaken by the N.E.A. Opinion was divided, however, as to the value of ability grouping. McGaughy was one of the most vigorous opponents and presents arguments against it.[3]

The most comprehensive summary of the arguments on both sides, to group or not to group, is that given in the Ninth Yearbook of the Department of

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[2]James M. Glass, "Classification of Pupils in Ability Groups," School Review, XXVIII (September 1920), 495-508.

[3]James R. McGaughy, "Homogeneous Grouping of Pupils," Childhood Education, VI (March 1930), 291-296.

Superintendence.[4] This study was in the form of a questionnaire and is even to this day one of the most frequently quoted. All members of the department were asked to answer the following questions: "From your experience, what are the chief arguments in favor of sectioning classes into homogeneous groups? From your experience, what are the chief arguments against sectioning classes into homogeneous groups?"[5] Advantages were listed much more frequently than disadvantages by the 500 superintendents of schools to whom the questionnaires were addressed. The opinions of these superintendents are of interest although they do not, of course, constitute final objective evidence. The most frequently mentioned advantages and disadvantages were as follows:

ARGUMENTS IN FAVOR OF HOMOGENEOUS GROUPING

| | Frequency of mention |
|---|---|
| 1. Homogeneous grouping makes differentiation of curriculums easier. There is better opportunity for differentiation of courses of study without resorting to individual instruction. It takes care of the assignment problem . . . . . | 195 |
| 2. Slow learners in separate groups are not discouraged by the superiority of others, but compete on more equal terms and develop their own leaders. Grouped together pupils feel freer to admit their slowness and to ask the questions necessary to their better understanding. They do not feel awkward or timid due to being conscious of the brighter and faster pupils. . . . . | 173 |
| 3. Homogeneous grouping places pupils in competition with others of fairly equal ability. It sets a pace that is a real challenge and a standard that is attainable . . . . . | 153 |

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[4] N.E.A., Department of Superintendence, "Five Unifying Factors in American Education," Ninth Yearbook (Washington, D.C. 1931), pp. 121-126.

[5] Ibid., 121.

## ARGUMENTS IN FAVOR OF HOMOGENEOUS GROUPING

| | Frequency of mention |
|---|---|
| 4. Children having more than average ability tend to form habits of idleness, inattention, and mental laziness if compelled to mark time to classes made up of average and below average pupils. When superior pupils are grouped together activities and discussions are on a higher plane. Greater opportunity is offered for more oral expression than others can follow . . . . . | 152 |
| 5. Homogeneous grouping enables the teacher to adopt methods of teaching to meet the needs of varying groups. He does not have to interest all in a presentation fitted only for a few. He can make a much more effective division of the time allotted to development, drill and application. He is allowed more latitude of experimentation . . . . . | 115 |
| 6. Homogeneous grouping facilitates the work of the teacher. It is easier to teach a more nearly homogeneous group. The faster groups can be made larger and the slower groups smaller, so that the latter may receive more individual attention. Since the range in the ability of the group as a whole is so much less the teacher sees more clearly the needs of each individual . . | 113 |
| 7. Competition is keener, pupils are more likely to work up to their capacities - better work results . . . . . | 100 |

## ARGUMENTS AGAINST HOMOGENEOUS GROUPING

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|---|---|
| 1. With homogeneous grouping, the slower groups lose the stimulus and the contributions of the brighter pupils . . . . . | 150 |
| 2. Pupils put in the lower ability groups sometimes develop a sense of failure and inferiority . . . . . | 99 |
| 3. Pupils put in the higher ability groups are apt to develop a superiority complex. It may cause bright pupils to under-evaluate the worth of qualities other than intellect, and thus promote intellectual snobishness . . . . . | 75 |

ARGUMENTS AGAINST HOMOGENEOUS GROUPING

| | Frequency of mention |
|---|---|
| 4. Homogeneous grouping is undemocratic and tends to create class distinction in the minds of some pupils. Through it there is danger of developing an intellectual caste . . . . . | 68 |
| 5. The adjustment of teachers to the various groups is difficult, particularly the lower groups. Some teachers object to teaching the dullest group. Relatively few teachers can handle this group competently. . . . . | 64 |
| 6. With homogeneous grouping, there are no outstanding leaders to inspire the slower groups. The slow child may become discouraged and even slower . . . . . | 63 |
| 7. It is very difficult to divide pupils into truly homogeneous groups, for a group that is more or less homogeneous in one subject may be heterogeneous in another. To illustrate, a group that has more or less the same ability and test scores in arithmetic may differ widely in ability and test scores in geography[6]. . . . . | 56 |

Carleton Washburne describes the administration and implementation of the system in Winnetka in which progress and promotion were entirely individual.[7] One of the thirteen advantages listed by Superintendent Washburne was that at least five per cent of the pupils were saved from repeating a grade and $5,000 was saved in a year. Though these points were strong arguments in favor of the system, in 1920 he also boasted that through the Winnetka Plan the

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[6] Ibid., 122-126.

[7] Carleton W. Washburne, "The Individual System in Winnetka," Elementary School Journal, XXI (September 1920), 52-68.

"grade lock-step system was abolished."[8]

Though differences were being recognised by more and more administrators not all were as willing as Carleton Washburne to accept and to provide for 'individual differences.' For example, William Ettinger Superintendent of Schools in the city of New York, presents a plea for careful classification, as characteristic of good administration.[9] Though he apparently is more concerned with the differences between groups than the individual differences within the groups when he calls the attention of the associate and district superintendents to realise that "Today progressive school administration requires that an earnest effort be made to sort our children on a scientific basis, so that group instruction may still be consistent with recognition of the fact that as regards physical and mental traits, one group differs widely from another."[10] This statement is indicative of the early regard for differences and was progressive compared to some of his contemporaries.

The emphasis in most of the writing involves either descriptions of the administration of plans for grouping or aspects of placement of pupils regarding promotion practices as will be seen from a review of the following articles.

Charles Scott Berry gives an account of a mammoth administrative and

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[8] Ibid., 68.

[9] William L. Ettinger, "Crude Classification Causes Waste," School Life, VII (November 1921) 66.

[10] William L. Ettinger, "Economy in School Administration," School and Society, XIV (November 12, 1921), 409.

instructional project which was the plan adopted by the Detroit Board of Education, September 1919, to meet the requirements of the platoon organization. All the first grade pupils were tested and divided into X-Y-Z groups according to their ratings on the Detroit First Grade Intelligence Test which was developed by the Psychological Clinic of the Detroit Public Schools. It is reported that this I.Q. test has a .69 correlation with the Stanford-Binet. Berry reports 77% of the Detroit principals in favor of this type of grouping.[11]

The study by Jones and McCall dealt with children of superior ability. It showed differences of opinion among teachers and supervisors concerning the policy of allowing bright children to skip grades and was based on 67 pairs of bright children in grades three to seven. The children were matched at the end of the two-year experimental period on the basis of mental age from Scale A of the National Intelligence Test and on chronological age. One group had chosen to enter accelerated classes for two years, while the other was in the regular classes. The Thorndike-McCall Reading Scale, the Woody-McCall Mixed Fundamentals Scale, and a test based on the Ayres Spelling Scale were given to both groups. The average educational age of the pupils grouped homogeneously in the accelerated classes was 145.42 months, while the pupils of comparable mental age in mixed classes had an average educational age of 138.28 months.

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[11] Charles S. Berry, "Classification by Tests of Intelligence of Ten Thousand First-Grade Pupils," Journal of Educational Research, VI (October 1922), 185-203.

Thus, there was a difference of 7.14 months between the two groups.[12] This difference must also be considered when we remember that the first group had the apparent intrinsic motivation to chose to be in the accelerated group though this is not considered by the experimenters as important enough to warrant consideration.

A study by Barthelmess and Boyer was made of 1,130 pupils in Philadelphia. They were divided into ability groups on the basis of individual examination by a clinical psychologist for the primary pupils, and on the basis of a group test for the intermediate grade pupils. There were 565 experimental pupils grouped into three levels of classes. Control schools were selected with groups of pupils of about the same average intelligence to enable a type of pairing of experimental and control pupils. The experimental group made a gain of 12.8 points, the control group 10.4 points. There was an improvement for the homogeneously grouped pupils in the high group beyond that of the control groups of 2.1 points in the medium group of 2.6 points and in the low group of 1.8 points. In the heterogeneously grouped classes the high pupils made the most improvement, the medium group next, and the low group the least.

The Philadelphia study of ability grouping indicated that, as concerns the improvement of arithmetic, reading and technical English skills, there is a statistically significant difference in favor of homogeneously grouped pupils

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[12] V. A. Jones and W. A. McCall, "Application of Two Techniques in Evaluating Some Policies of Dealing with Bright Children," Teachers College Record, XXVII (March 1926) 825-835.

as compared with heterogeneously grouped pupils.[13] Since ability grouping is only one of many factors which facilitate improvement, a very small amount of superiority may be very significant. It must be remembered though, that the superiority may be due to greater professional stimulation in the experimental schools.

As an indication of the sign of the times, O'Shea reports on a timely plan in 1934 to accommodate the pressures to economize. He recommends his plan of grouping which involved five groups and a financial saving.[14]

A partial interpretation of all the facets of the Lincoln School is given by the principal, Rebecca Coffin, who merely notes that they have a semblance of ability grouping and that it is looked upon as an attempt on the part of the school "to free itself from various handicaps inherent in the administrative ogres known as 'grade classification' and 'promotions.'"[15]

The study by Russell is really an evaluation of an administrative plan or system of interclassroom grouping known locally as "circling" which was widely used in the intermediate grades of the San Francisco public schools. In this system pupils of the intermediate grades change rooms to go to any other grade

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[13]Harriet M. Barthelmess and Philip A. Boyer, "An Evaluation of Ability Grouping," Journal of Educational Research, XXVI (December 1932), 284-294.

[14]William A. O'Shea, "An Improved Method of Administration in the Elementary School," Education LIV (February 1934) 362-367.

[15]Rebecca F. Coffin, "Life in the Elementary School - An Interpretation," Teachers College Record, XXXVII (May 1936) 372-382.

of the level involved if their reading achievement, measured by standardized test and their teachers' judgment, indicate they are above or below their own grade level of reading ability. The advantage mentioned is that this gives less span and that usually there are no subgroups in each classroom, which point alone leads us to question such a plan.

In three schools each, experimental and control groups were matched by the results of group intelligence tests and by reading age on standardized tests. The study compares the achievement of a group of 278 children from below average, average and above average districts of the city who have "circled" for reading for two years with the achievement of a group of 248 in the control classes who came from three similar districts and who have not "circled." At the end of two years, standardized tests results indicate "no reliable difference" in status or achievement between the two main groups in either mental age or reading age; both gained approximately 1.9 years.[16]

A number of factors evidently suggest to Russell that, if this system of interclassroom grouping is continued on such a wide scale, it should be studied further by the principals and teachers involved. He further emphasizes the importance of the role of the classroom teacher. Russell emphasizes that "this system must be regarded as an administrative procedure whose success and failure depends upon the way it is used, teacher's knowledge of the individual child and efficient and democratic classroom procedures continue to be more

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[16]David H. Russell, "Inter-Class Grouping for Reading Instruction in the Intermediate Grades," Journal of Educational Research XXXIX (February 1946), 462-470.

important than any external arrangement for reading instruction."[17]

Two matched groups of gifted junior high school students in New York were compared by Justman.[18] The experimental groups, which were homogeneous in ability, were special rapid progress classes, while the control groups were in heterogeneous normal progress classes. Matching was done for initial status on the basis of school attended, grade, sex, M.A., C.A., I.Q., and reading and computational skills.

The groups showed little difference in social and personal adjustment and had similar patterns of attitudes and interests. Justman concluded that grouping of gifted children in special progress classes is generally accompanied by academic achievement superior to that attained by matched pupils in normal progress classes with no detriment to social acceptance, interests, attitudes and aspects of personality.

Evidently, Justman is aware of the apparent flaw in the experimental design when he explains, that "to be sure, in several of the areas to which attention is here directed the better attainment which special progress pupils manifest must be attributed, in part, to the greater amount of course work which they complete and to the selection for such classes of pupils who show greater initial mastery of reading skills. However, these two factors, operating independently or jointly, do not wholly account for the superiority of the special progress group. The indications are that some of the advantage is

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[17]Russell, p. 470.

[18]Joseph Justman, "Academic Achievement of Intellectually Gifted Accelerants and Non Accelerants in Junior High School," The School Review, LXII (March 1954), 142-150.

associated with pupil enrollment in a special progress group."[19]

As may have been expected from the content of the articles, the writers who contributed the greatest number of articles on administration were superintendents of schools rather than professors of education, as in most other areas. Professors of education rank second in amount of writing. These two professional occupations account for almost as many as all others combined. Evidently, the interest was widespread though because principals and teachers of all levels wrote articles as did graduate students in education, directors of psychological clinics, reading clinics, directors of departments of research, guidance and administration, supervisors of special activities, and subject supervisors. The Office of Education was represented, and also a member of a board of education. Though these contributed to the uniqueness of this section, still the editorial boards and professional writers of the periodical contributed in the form of editorials and news comments related to the administrative aspects of ability grouping.

In summary of these articles we note that the writing on administrative aspects of ability grouping is mainly concerned with reporting and describing the administration of plans for grouping and the evaluation of the methods used in expediting a program already agreed upon. Some dissatisfaction with the current organizational structure is evidenced. The writing also indicates an almost constant movement toward attempting, what at the time appeared as better and better ways of meeting individual differences, through administration of programs utilizing ability grouping.

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[19] Ibid., 150.

# CHAPTER VII

## CURRICULUM

Historically, the first form of ability grouping to be widely used was the separation and special teaching of the mentally retarded followed by sporodic attempts of grouping for the gifted. The first significant note of curricular adjustment for different levels of ability, during this time span, is found in the description of provisions for the gifted in a Terman class in which the students were "allowed" to take an enriched curriculum and to make individual progress. It is further reported that as a result of this curriculum enrichment from one to four grades were covered in six months.[1] Truly this was a major advance, though it appears the "enrichment" actually only meant the students could cover as much of the set courses of study as possible.

An interesting comment on the reasons for using grouping as a remedy for providing for all levels of ability is quoted by a former principal as to the need for establishment of "Terman classes" and other ability groups in his New York school. William Grady is quoted as stating, "You cannot garner souls from the four corners of the earth without reaping a few of the supremely talented of godlike vision, a bulk of mediocrity constituting what one writer calls, 'The ballast of civilization,' and lastly a harvest of thorns and thistles, of

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[1]Louise F. Specht, "A Terman Class in Public School No. 64, Manhattan," School and Society, IX (March 29, 1919), 393-398.

moral, mental and physical debris."[2]

An important and frequently mentioned study was made by Dvorak and Rae in the first grades of the public schools of Caldwell, Idaho, which included 110 pupils.[3] They set up two groups of pupils they believed homogeneous in mental ability and academic achievements. They were selected for the experimental study on the basis of three I.Q. tests and considered all those pupils just entering school as indicating zero scores on academic ability. This gave them one experimental group and one so-called "mixed" group.

The teachers of the experimental group knew they had the high group but it is reported the teachers of the others did not know which had been chosen. The "mixed" group followed a regular first grade course of study. The experimental group followed that also, but with enrichment and adaptation to individual differences.

At the end of the year, they compared the two groups. The experimental group, as compared with the mixed group, made higher scores on the Gray Oral Reading Check Test and on the Pressey Second Grade Attainment Scale in Reading, but lower scores on two tests from the Iowa Spelling Scale and the Buckingham Extension of the Ayres Spelling Scale. The authors explain this difference as due to the fact that considerable adaptation of materials and methods was made

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[2]Ibid., 393.

[3]August Dvorak and James J. Rae, "A Comparison of the Achievement of Superior Children in Segregated and Un-Segregated First Grade Classes," Elementary School Journal, XXIX (January 1929), 380-386.

for the experimental group in reading but practically none in spelling except a decrease in drill. They conclude: "where the methods and the materials of instruction are adapted to the ability of the pupils, as is possible in a segregated group, greater achievement is the result. Where the methods and the materials are not adapted to the ability of the pupils, no greater results are achieved merely because of homogeneous grouping.[4] Data from the test results yields greater achievement in reading for the experimental group with an average score 52% larger than the average score of the mixed group. The mixed group made 45% more errors on the Gray Reading Test and took 58% more time while the segregated group of pupils could spell only approximately 75% as many words as the pupils in the mixed group.[5]

These results of grouping seem contradictory until further analyzed. Both groups exceeded the other first graders and were above first grade norms, but the effects of grouping on the pupils concerned were positive in reading and negative in spelling. An examination of the adaption of the methods and materials of instruction to the ability of the segregated group, such as special reading material tables used by the pupil, showed the teacher more successful in reading than in spelling. In spelling the methods and content closely approximated those of the mixed group with the exception that since the experimental pupils seemed to require only a small amount of drill to spell correctly the words presented, less drill was used even though, as the authors,

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[4] Ibid., 385.

[5] Ibid.

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[4] Ibid., 385.

[5] Ibid.

explain "spelling is a drill or habit forming subject." Consequently, the law of exercise seems to explain the poorer achievement of the experimental group in spelling.

To corroborate this principle Cook found and reported that with high school pupils, where no special adaptations of methods and materials were utilized, the grouping of bright pupils was followed by "indifferent success."[6] Miller, in a similar report emphasizes that the classification of high school pupils on the basis of mental ability makes possible but does not insure adaptation of technique and materials of instruction.[7]

Dr. O'Shea, New York superintendent of schools, presents a basic report geared to the general public to help them understand the newly inaugurated method of classifying children according to ability. Heretofore, there was no plan for classification except a numerical arrangement; 160 children divided into four classes equaled 40 children in each class. He explains the new plan as really a sectioning of pupils into groups for all work but the bright groups will be expected "to cover the whole of the syllabus and the slower less, but all will be given diplomas because they have all covered the prescribed course."[8] Thus grouping is advocated but the curriculum adaptation is merely

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[6]R. R. Cook, "A Study of the Results of Homogeneous Grouping of Abilities in High School Classes," The Education of Gifted Children, Twenty-third Yearbook, of N.S.S.E. Part I (Bloomington, 1924), p. 303.

[7]W. S. Miller, "The Administrative Use of Intelligence Tests in the High School," Intelligence Tests and Their Use, Twenty-first Yearbook of N.S.S.E. Part II (Bloomington, 1922), p. 189.

[8]William J. O'Shea, "Reports: The Grouping of New York City Pupils According to Ability," School and Society, XXVII (March 24, 1928), 691.

differentiation of material by amount in not covering as much for the slow child. This was a small but significant beginning of curriculum adaptation to individual differences; progress was slow in recognizing the need for more complete and flexible curricular adaptation.

In the study of Gray and Hollingsworth, in addition to the usual curriculum gifted groups studied French, biography, the history of civilization, and did extra work in science, mathematics, English composition, and music without any loss in achievement in the tool subjects compared with gifted pupils in mixed classes.[9] These groups, however, were special gifted groups rather than bright ability groups, which is a significant difference.

Dvorak and Rae's experiment corroborates their interpretation of the literature on the homogeneous grouping of pupils and forms a succinct summary of curriculum adaptation to that date. Their findings indicate:

1. When the methods and the materials of instruction are adapted to the abilities and the educational needs of homogeneous groups the results are positive.

2. The mere segregation of bright pupils into homogeneous groups without these adaptations produces negative or indifferent results.

3. Relatively little has been done in adapting methods and materials of instruction to the needs of homogeneous groups of pupils at various levels of ability.

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[9]Howard A. Gray and Leta S. Hollingworth, "The Achievement of Gifted Children Enrolled and Not Enrolled in Special Opportunity Classes." Journal of Educational Research, XXIV (November 1931), 255-261.

> Now that educators recognize the existence of individual differences in the mental ability of pupils one of the next great steps in education must be the discovery of those techniques and materials best suited to the needs of homogeneous groups of pupils at various levels of ability.[10]

Writers on the junior high school such as Ryan and Crecelius, Lyman, and Brahm, even from the very beginning of this type of organization, take ability grouping for granted.[11] However, Lyman maintains that it is just an administrative device "of little avail unless operated in conjunction with a curriculum which accommodates itself to the needs, tastes, and capacities, of individual pupils.[12] In connection with this an article, which shows in a way how far adaptation of curriculum construction and materials has progressed from Dvorak and Rae's study to the present, is reported by Brahm. Being a principal of a junior high school, he emphasizes the approach from that position and maintains that a grouping plan is much more likely to succeed if: "the textbooks and materials are selected on the reading difficulty and interest level of the group (which may vary as much as from 4th grade to 10th grade); the attitude and training of the teacher and the teaching methods are adjusted to the group; plenty of teaching aids are available."[13]

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[10]Dvorak and Rae, p. 385.

[11]Herber H. Ryan and Philipine Crecelius, Ability Grouping in the Junior High School, (New York, 1927).

[12]R. L. Lyman, "Individualization in the Isaac E. Young Jr. High School, New Rochelle, New York, School Review, XXXIX (April 1931), 257.

[13]Robert V. Brahm, "Grouping in the Junior High School," National Education Association Journal, XXXVIII (September 1959), 22-23.

Principals were responsible for more of the writing than any other group. Superintendents ranked second, and college professors of education ranked third. Few articles concerning the curriculum aspects of ability grouping were written by those involved with curriculum matters as a sole responsibility. Probably, this can be explained in part by remembering that it was not until rather recently that departments for curriculum development were established.

In summary, the progression of curriculum adaptation is probably the most significant aspect of this writing. From the identical content, one textbook stage, to differentiation of amount, content, and form was a long, though mainly steady advance. These changes are clearly evident in these articles on the curriculum in regard to ability grouping.

# CHAPTER VIII

## TEACHERS

The success of an organization by ability groups depends very largely upon the attitude of the teachers. This is a matter that merits careful attention on the part of the administrator, because the principles underlying such an organization differ radically from those underlying the traditional school organization under which many of the present teachers have been trained. Experience shows that some, but by no means most, teachers dislike ability grouping. To gain evidence in this regard Lincoln and Wadleigh asked thirteen questions of Reading, Pennsylvania, teachers in grades one through nine, about their reaction to the plan of ability grouping in operation there. The response was generally favorable to ability grouping, except that the teachers were about evenly divided on the question as to whether or not grouping tends to make the bright child egotistical and anti-social.

The teachers found it easier to teach ability groups and stated that fewer disciplinary problems appeared after ability grouping was introduced.[1]

Another unconvincing experiment was attempted by Bonar to prove, if possible, the value of homogeneous grouping. He states the purpose of the experiment is "to determine the merits of homogeneous grouping of children; to

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[1]Edward A. Lincoln and Verna L. Wadleigh, "Teacher Opinion on Ability Grouping," Journal of Educational Research, XXI (April 1930), 277-282.

meet the objections of teachers who generally prefer not to teach the slow groups; and to answer the criticism of parents who contend it is undemocratic."[2] Bonar compared the achievements of three first-grade classes, one represented the upper third of the group, one represented the entire group, and one represented the lower half of the group. A number of different tests were used but only gross comparisons from group to group were made.[3] No effort was made to compare achievements of pupils of a certain ability level in a homogeneous group with those of similar pupils in a mixed group. No means was mentioned as to how "to meet the objections of teachers." That there were objections and criticisms was treated as an assumption.

To augment the incomplete knowledge regarding teachers' opinions of ability grouping Turney and Hyde sent questionnaires to the twenty-seven teachers of the Lawrence Junior High School. Every teacher had taught both ability groups and mixed groups.[4]

The results show that in the teachers' judgment motivation is better for all groups although the average and low groups are not as definitely motivated as are the high groups. Unanimous agreement was given on two points; that method and materials are adjusted following ability grouping, and that ease of teaching also follows ability grouping. Only the question, "Does grouping tend

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[2]H. S. Bonar, "Ability Grouping in the First Grade," Elementary School Jounral, XXIX (May 1929), 703.

[3]Ibid., 706.

[4]Austin H. Turney and M. F. Hyde, "What Teachers Think of Ability Grouping," Education, LII (September 1931), 39-42.

to brand or stigmatize the pupils?" Was there anything even approaching a difference of opinion.[5] Certainly from the results of this survey it could be said that if teachers opinions are of value, ability grouping in this school is distinctly more satisfactory than heterogeneous grouping. But we must remember these are only opinions and of a limited number of teachers.

A more extensive survey was attempted to find out what parents, teachers, principals and other school officials think about several phases of ability groupings. The questionnaire was sent to sixteen cities and the primary purpose was to find out the extent of opposition or approval of such grouping.[6]

The findings of this study reveal that on the whole parents seemed favorable to the use of grouping (in those cities willing to cooperate with this investigation) though there was more parent opposition to grouping than was indicated by principals' estimates of parent complaints. The section in which the child was located was an important factor. Teachers and parents of children in bright sections were more in favor of such grouping than teachers and parents of children in other sections. Teachers seem to favor it more than parents. Less than five per cent would like it abandoned. Principals and other school officials were equally as pleased as the teachers.[7]

Reports of opinions concerning the desirability of ability grouping have

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[5] Ibid., 41.

[6] Walter H. Sauvain, "A Study of the Opinions of Certain Professional and Non-Professional Groups Regarding Homogeneous or Ability Grouping," Teachers College Record, 11 (November 1934), 145-146.

[7] Ibid., 61.

generally favored ability grouping. There are some disagreements on record and the results of some experiments of ability and mixed groups offer more disagreements. Whether these differences in opinions and experimental results are due to the bases for sectioning, variabilities in teaching, differences in adaptation of materials or methods to the groups, or failure to consider range of abilities actually existing within the various groups has not been satisfactorily indicated in these published reports.

A wide variety of bases have been proposed and used for ability grouping at various instructional levels. But the bases of judgment which has been used for the longest time in the formation of ability groups is the estimate of the child's ability given by his teacher. This began as the first measure and practically none of the later students of the problem have been willing to omit teacher judgment as one, at least, of the bases of grouping. Most of the studies which have been made to determine the degree to which teacher judgment is valid in the selection of bright and slow students have found that teachers predict success reasonably well. For example, Varner found that teachers could select from 20 to 40 per cent of the bright and from 40 to 60 per cent of the slow students, when compared to intelligence quotient scores from the Haggerty Intelligence Examination. It was also found in this study that it is more difficult to select the bright pupils than to select the slow pupils, and that it becomes less difficult to select the bright and slow pupils as they become elder.[8]

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[8]G. F. Varner, "Can Teachers Select Bright and Dull Pupils," Journal of Educational Research, VI (September 1922), 126-132.

Apparently, from the available evidence teacher judgment and results of intelligence tests are of approximately equal importance for ability grouping, and it is usually recommended that both should be used in the classification of pupils into groups. Undoubtedly, other factors should be utilized also, and as we have seen many different bases are used in various places, with varying degrees of success.

One of the earliest of the studies regarding methods of teaching was made by Burt, Chassel and Hatch and notes no significant differences in the correlations between intelligence and achievement when all groups, experimental as well as control groups, were taught by the same method and at the same rate. During the second semester when the high and medium groups and their comparable control groups were "pushed" to cover the work in thirty hours instead of thirty-seven, there was a distinct advantage for the high and medium ability groups. This experimental study involved 333 pupils grouped in homogeneous classes on the basis of mental test data in a course in elementary psychology at the university level.[9] It was one of the earliest studies in which a control group was used and though the structure of the study as reported seems adequate the use of final marks as a measure of success in the course makes one question the value of the study.

The theory underlying this principle aspect of the investigation is as follows:

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[9]Harold E. Burt, Laura M. Chassel, and Elizabeth M. Hatch, "Efficiency of Instruction in Unselected and Selected Sections in Elementary Psychology," Journal of Educational Psychology, XIV (March 1923), 154-161.

> If the instruction given to a group of students is such that each one is stimulated to do his best, the correlation between intelligence and the academic marks obtained in a given course will be high, conversely, if intelligence correlates highly with marks - it is probable that the instruction was efficient in stimulating each student to use this maximum intellectual ability. If this criterion is valid, it is possible to compare efficiency of instruction in a selected homogeneous psychology section with that in an unselected control section taught by the same instructor.[10]

This is the principle upon which the results of the experiment have been evaluated and seemingly underscores the naivete of the investigators to rely on the complete and absolute objectivity of teachers' marks for the validity of the experiment.

Worlton, Assistant Superintendent of School of Salt Lake City, Utah, presents a synopsis of his unpublished doctoral dissertation at the University of California. He studied 3,700 pupils in grades four to eight in twenty-four schools in Salt Lake City. Two thousand fifty-two were placed in homogeneous classes on the basis of intelligence test results, while the remaining group of equal intelligence formed the control classes. The time given for instruction in each group, the content of the courses, and the methods used for instruction are reported to be identical. Pupils in homogeneous classes made greater gains in knowledge of the subjects taught than did pupils in heterogeneous classes. At the beginning and end of the semester the Thorndike-McCall Reading Scale, Morrison-McCall Spelling Scale, and the Salt Lake City Mixed Fundamentals standardized tests were administered to both groups. Worlton does not present his numerical data but his conclusions, based on the test results and on the

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[10] Ibid., 195.

opinions of teachers, are as follows:

1. Pupils classified with respect to general ability tend to be classified with respect to ability in reading and spelling.

2. Classes which are made homogeneous with respect to general ability tend to improve their homogeneity with respect to subject matter more than do heterogeneous classes.

3. Pupils, in homogeneous classes make greater gains in knowledge of the subjects taught than do pupils in heterogeneous classes.

4. In general, pupils are in a more wholesome educational environment when they are taught in homogeneous groups.[11]

Progressive retardation, shown as the intelligence level increased from the lowest to the highest, was the cause for initiation of a survey by Worlton in Salt Lake City in 1924. Thereafter, a second large scale study in 1927 was launched during which homogeneous grouping was tried as a remedy. This second study by Worlton involved 714 experimental students who were fast learners. They were grouped on the basis of the teachers' judgments of similar educational needs and abilities. These pupils, in grades four to seven, showed that in regard to reading, spelling, and mixed arithmetic fundamentals there was a slight advantage for the above average pupils when in homogeneous groups.[12]

A study of English achievement was made by Billett in the ninth grade of a Plainesville, Ohio, high school for three successive years. The homogeneous

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[11]J. L. Worlton, "The Why of Homogeneous Classification," Elementary School Journal, XXVII (December 1926), 265-274.

[12]James J. Worlton, "The Effect of Homogeneous Classification of Scholastic Achievement of Bright Pupils," Elementary School Journal, XXVIII (January 1928), 336.

experimental groups were divided, as bright, average and slow groups, on the basis of the Terman Group Intelligence Test and were comparable in intelligence to the two heterogeneous control groups. During each of the three years all five classes of pupils in the experiment were taught by the same teacher in the same classroom to equalize the teacher factor in the experiment. Evaluation was made, during the first year of the study, on the basis of the Briggs English Form Test, Charters Grammar Test, Charters Language Test, Inglis Vocabulary Test, and Hudelson Composition Scale, but the second and third year, four more achievement tests were added to complete this evaluative battery.[13] The mean gain in each test each year was obtained separately for homogeneous and heterogeneous groups of slow, average, and fast pupils. The results seemed to indicate that homogeneous grouping as compared with heterogeneous grouping appears to be somewhat superior for slow children, slightly superior for average children, and slightly inferior for able children. The author attributed the results of the second year with average and fast children to the fact that the sectioning was based in part upon teachers' marks. For this reason the basis was changed the third year to intelligence quotient alone.

Billett's general conclusions were as follows:

1. Teachers' ratings or teachers marks should never be used in toto or in part as a basis for homogeneous grouping for the purpose of promoting the educational development of pupils, because such ratings or marks are largely measures of qualities which education seeks to change.

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[13] Roy O. Billett, "What the High Schools Are Doing for the Individuals," School Life, XVI (January 1931), 85-87.

2. Homogeneous grouping for the purposes of education should be based on traits not subject to change through education, such as the intelligence quotient, the probable learning rate, or the index of brightness.

3. Grouping on the basis of the intelligence quotient has shown a marked measurable advantage for slow pupils, some measurable advantage for average pupils, and a slight measurable disadvantage for bright pupils.

4. The slight measurable loss to bright pupils because of homogeneous grouping is far outweighed by the measurable advantages which seem to affect the records of the slow and average pupils.[14]

The fact that a repetition of the experiment the second year corroborated the conclusions of the first year is, however, of some importance and should not be overlooked.

Superintendent McGinnis, explains a difficulty in relation to teaching methods and ability grouping. He found that in such grouping teachers tend to assume that the abilities and needs of the pupils of the group are practically equal and therefore there is a tendency to neglect the individual differences which actually do exist within any group.[15]

Thus, whether or not there is ability grouping in the school, the teacher of any subject faces adjusting instruction to pupils, differences in abilities and their needs and interests. Therefore, the teacher must teach the individual as a unique member of the group. There is no place for uniformity

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[14] Ibid., 194.

[15] W. C. McGinnis, "An Improvement of Learning Program," Journal of Education, CXIV (September 7, 1931), 70-71.

of instruction and therefore all programs of grouping, whatever the type, rest for success upon the teacher. Whatever the grouping practice which may be adopted, an able teacher, given freedom to work creatively, is the most important factor in the situation. The research of Jones amply supports this view.[16]

In relation to this regard for the teacher a unique and important consideration is presented in one of the more recent articles. Ann Morrow brings to our attention that, "individual differences are found in teachers as well as in boys and girls.[17] Certainly this is an easily over looked facet in our concern for individualization.

Shane also regards the teacher as the most important factor in any instructional plan. He clearly states "the philosophy and ability of the able teacher are undoubtedly more important than any grouping plan, however ingenious it may be, with respect to creating good environments for teaching and learning."[18]

In a school report of the superintendent of schools of Worcester, Massachusetts, much concern is evidenced that, "there is an impression in the minds of some people that an ungraded school is better than a graded one. Which is better will always depend upon the teachers; the best teacher will

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[16]Daisy M. Jones, "Experiment in Adaptation to Individual Differences," Journal of Educational Psychology, XXXIX (May 1948) 257-272.

[17]Ann Ess Morrow, "What's the Difference," Education, LXXVIII (September 1957), 75.

[18]Shane, 9.

always have the best school whether graded or not."[19] Surprising as this may seem, the date of the above statement is 1881 and the importance of the teacher is at least as equally important today as in the 19th century.

Professors of education were responsible for most of the articles, directors of educational reference and research were second, and assistant and district superintendents were next, in the amount of writing on teachers and teaching.

Like all Gaul, the writing on this classification was divided into three parts. A summary of the writing discloses that the first section was concerned with those articles describing investigations to determine teacher opinion of ability grouping. These showed there was some division of teacher opinion but that teachers were generally favorable to ability grouping. The questionnaire technique was the most frequently used instrument. The second part was concerned with the ever-present problems regarding bases for grouping. Teacher judgment and marks were considered. Finally, the third partition of the chapter dealt with methods of teaching and the great regard for the teacher as important for the success of any instructional program.

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[19]Boykin, II, p. 881.

## CHAPTER IX

## STUDENTS

The writing in relation to the student and ability grouping is really a category that is included intrinsically in all the previous classifications. Fundamentally, each of the articles was concerned either directly or indirectly with one end--the good of the student. This in part explains the lack of writing on this subject alone, found in these professional periodicals. Fewer articles in these periodicals relate to this category solely and specifically, than any other category. Yet, each article in a way, was concerned with the student.

The following is an analysis of some of the controlled experiments done to determine if there are any educational advantages, as measured by the amount of student learning, when students are grouped according to ability. Caution as to the need for accurate and complete interpretation of results must be emphasized or misleading interpretations are the result. In a study of the Los Angeles program of ability grouping it was found that the ability groups were reversed in measures of weight and in tests of physical and motor capacity.[1] Since the pupils involved in this experiment were also reversed in

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[1] Elizabeth T. Sullivan, "Data on Ability Grouping from Los Angeles," Adapting the Schools to Individual Differences, Twenty-Fourth Yearbook, N.S.S.E., Part II (Bloomington 1925) 148-151.

chronological age, it was probably this latter factor that was more significant rather than those relating to health as interpreted. This is an example of the need for careful interpretation of results.

Another instance of interpretation of results is given in a report of a 1920 experiment involving 323 pupils from first grade to the senior high school level. As a result of a form of ability grouping "thirteen per cent were given extra promotion on the basis of test results and of these all but three made good. Not a one was physically harmed."[2] This gives some indication that barely forty years ago an increase in the rate of progress up the educational ladder could lead an educator to think this would result in physical harm.

Another more thorough study was undertaken at the high school level by Moyer. He arranged three ability groups; plus, medium, and minus; and mixed groups in freshman algebra and Latin. Plus meant the top third in score on the National Intelligence Tests, medium the middle third, and minus the low third. Plus pupils in plus classes were compared with plus pupils in mixed classes on the Hotz Algebra Scales and on the Hermon Latin Tests, which were given at the end of the year. Similar comparisons were made for medium and minus classes in algebra but not in Latin. Moyer found that the ability groups of plus pupils had about the same scores in algebra and slightly higher scores in Latin than did comparable pupils in mixed classes. Medium pupils in ability groups surpassed medium pupils in mixed groups in algebra, but minus pupils in ability

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[2]J. Wesley Barton, "School Organization on an Objective Basis," Educational Administration and Supervision, VI (April 1920), 197.

groups made lower scores than comparable pupils in mixed groups. Moyer adds an interesting item: if pupils are segregated according to ability, those who are accidentally misplaced in higher sections than their ability warrants, may actually profit by this misplacement, but those who are misplaced in lower sections may suffer from such misplacement."[3]

The chief criticisms of this study are that the experimental and control groups did not have the same teacher, and that no special attention was given to adjusting methods and materials to the experimental groups. No initial tests were used, but actually that omission is less serious in freshman Latin and algebra than almost anywhere else.

The following description explains a project as satisfactory that appears to reek of inequality and negative psychology, but according to the writer is highly recommended. "The Pit," so-called by the students, was a room of "ability" grouped students. The basis for this grouping was simple, all students failing in two subjects were included! Well, here I am how do I get out? is supposedly characteristic of those enrolled because here in "The Pit" all privileges were removed such as belonging to clubs and voting for officers. Their reason given for the effectiveness of this scheme is that "a student will avoid something that public opinion frowns upon and will try to gain or hold on to something that public opinion favors."[4] It does not seem possible that a

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[3]Edward L. Moyer, "A Study of the Effects of Classification by Intelligence Tests," The Education of Gifted Children, Twenty-third Yearbook, Part I, N.S.S.E. (Bloomington 1924), 313-322.

[4]Margaret Alton, "The Pit," Education, L (February 1930), 361-363.

principal of a junior high school could recommend this type of program.

William Herr compared two groups of junior high school students of superior intelligence. The members of the experimental group had freely chosen to be grouped in homogeneous classes for seventh and eighth grade and also to accomplish the work of those grades in just one year.[5] These pupils were matched with a control group which entered the ninth grade at the same time as the experimental group. The ninety-seven pupils, fifty-three boys and forty-four girls, were matched for I.Q., age, achievement, age, and teachers' ranking of citizenship. The average I.Q. in each group was 136. When the groups were compared on their high school work, no outstanding differences in scholastic achievement were found, though an American History test and a general information test both favored the experimental group.[6] It is interesting to note that more of the differences were in favor of the rapid-progress boys than in favor of the rapid-progress girls. And it must be noted that the means of the scores for both groups in the standardized tests used were considerably above the standardized grade norms. In the light of the evidence offered in these two articles it conservatively may be said that acceleration in the junior high school as described in this study has not minimized the scholastic achievement of the accelerated pupils in the senior high school.

This study by Herr was based on high school achievement following an

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[5]William A. Herr, "Junior High School Accelerates and Their Peers in Senior High School," The School Review, XXXV (March 1937), 186-195.

[6]Ibid., (April 1937), 289-299.

experience of homogeneous grouping in junior high school. This seems to assume that having been in a homogeneous group at one time affects the individual's learning even when he is no longer a member of such a group. Expectations of this type were not uncommon in these early studies when it was apparently felt that the fact of grouping, by itself, rather than the improved teaching techniques which it may permit, increases achievement of students under such a plan.

One of the most comprehensive studies of homogeneous grouping was made by Alice Keliher. In addition to the analysis of the basic assumptions underlying this method, Keliher also asked a total of 505 children to make statements which would indicate their knowledge of the basis of their own grouping. Keliher lists the conclusions that may be drawn from this survey as: "the children in the situation did seem generally to know their own grouping; and the responses indicate the presence of many self-pictures, a large number in terms of inferiority or superiority to other children."[7] At this time, asking children directly was almost a novel approach.

These writers who contributed the greatest number of articles were directors of divisions of curriculum or of research and guidance bureaus of large city school systems. Professors of education rank second and principals third in the volume of writing on students in regard to ability grouping found in these professional periodicals.

Little of great worth was written on this category in the selected periodicals. The articles evidence a superficiality that was not present in

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[7]Keliher, p. 129.

the other writings. Moyer, Keliher, and Herr stand out above the others, but even their writing related to this classification is not without fault. Keliher, in the major portion of her study presented an extensive philosophical exposition on homogeneous grouping. The very short, inconclusive questionnaire-type survey of pupil opinion reported here was not as definite or as thorough. Of course, this was a minor facet of her complete dissertation and therefore probably did not warrant equal consideration. Though this study of pupil opinion was treated as almost an after thought, we commend Dr. Keliher; few educational investigators before her had even attempted to query the pupils involved in grouping programs.

Moyer and Herr did present two relatively thoughtful reports of their experiments. The other studies do not warrant further analysis.

# CHAPTER X

## EVALUATION SUMMARY

The first studies of ability grouping were judged subjectively. In most cases the judgments made upon the evidence at hand were favorable, but it must be remembered that it was usually the originator of the plan who judged it and as would be expected, ordinarily he was not unbiased.

Later some evidence was presented of so-called scientific data in the form of the differences in achievement between grouped bright pupils and grouped slow pupils. From the results, some investigators concluded that there was great value in ability grouping, overlooking the fact that bright pupils would surpass slow pupils, whether grouped or not.

The fact that the results of the experiments differ so greatly arises from the great variety of conditions, methods, and purposes of the studies. Few studies have much in common with any other in regard to content, method, or type of subjects used. Some tried to equate groups, others did not. Some tried to hold content and methods constant. Some tried to manipulate the classroom assignments of pupils while others were content to use available data.

We came to see that one major deficiency in these experiments was that many of them did not provide for differentiation of content and method according to the level of ability. As far back as 1926 Worlton, especially, made a point of having given specific instruction to the teachers to keep course

content and method of teaching identical for all classes. Others, such as Burt, Chassel and Hatch implied that they first attempted to hold methods and materials constant, and that only by enrichment of course content, and an attempt to "push" the more able students, was an advantage for ability grouping shown. The fact that the same teachers taught all sections of the classes in experiments such as those of Billett, Purdom, and others was an attempt at improved experimental control. However, we must emphasize that the individuality of the teachers and the amount of spontaneous adaptation made by the different teachers from group to group may vary considerably. The very fact of introducing a control group can by itself put limitations on the adaptation of the curriculum to the ability groups.

In many cases, the length of the experiments has been too short to permit significant changes to be observed. Several studies as described in this writing lasted for one semester or less. Many studies reported in these articles were insignificant in content and therefore not emphasized in this analysis.

One major criticism of most of these experiments can be based on the experimental design. The use of matched pairs, in particular, is considered a rather weak technique. Yet, this method was used by a large number of studies, especially those that dealt with the superior child. The studies of Jones and McCall, Herr, and Justman, are obvious examples. The great weakness of this method lies in the fact that, although the groups are equated on some factors, the very reasons which prompted some pupils to enter the experimental classes and which influenced other pupils to remain with the normal group may well show some underlying motivational factor which has not been taken into

consideration in the experiment.

Another defect of experimental design is evidenced in several studies which used a test of general ability to section classes for several different subjects. It would probably be more appropriate to combine this information with information of each pupil's ability in the subject and to use the combined scores for grouping. Studies by Moyer, Jones and McCall, Worlton, Bonar, Dvorak and Rae, Gray and Hollingsworth, and Barthelmess and Boyer, all show that grouping was done on the basis of only one variable while the testing included several variables.

Few authors take into consideration the possibility that factors other than grouping could influence the test scores in these experiments. Justman is one of the very few who emphasized that the fact of covering more material in certain subjects in special homogeneous ability grouped classes for superior students may be a reason why this group exceeds an equally able group in heterogeneous classes which have not covered the material. Attempts to control more than a very few of the possible variables affecting the learning situation are scarce in these studies.

Turney felt that when an effort to adapt the means and materials of instruction to the needs of different levels was made, achievement was better in ability groups. However, a later summary of the subject by Cornell states, "Reviewers are generally agreed that the experimental evidence as to the achievement status of pupils under a plan of ability is inconclusive."[1]

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[1]Cornell, p. 295.

A recent extensive summary of research on grouping was made by Otto for the Encyclopedia of Educational Research.[2] He concludes that the evidence slightly favors ability grouping, particularly where adaptations of standards, material and methods are met. The evidence, he maintains, "indicates greatest relative effectiveness for dull children, next greatest for average children, and the least (frequently harmful) for bright children."[3]

Partially in contradiction of Otto, other writers report that there is evidence to indicate that separate, homogeneous classes for the gifted children result in greater achievement.

More recently, in 1958 Passow said, "Considerable research has been reported under the general heading of homogeneous vs. heterogeneous grouping with no significant unanimity of findings. However, comparative studies of gifted students in regular and special classes on all educational levels tend to be more uniform in denoting beneficial effects of the special classes on academic, personal, and social growth."[4]

But we come to realize that much of the apparent confusion that exists regarding the bases for ability grouping is the result of the absence of clear-cut notions regarding the philosophical and psychological concepts underlying the principle of ability grouping, the purposes to be achieved by it, and the

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[2]Henry J. Otto, "Organization and Administration," Encyclopedia of Educational Research (New York, 1950), pp. 367-383.

[3]Ibid., 377.

[4]A. Harry Passow, "Enrichment of Education for the Gifted," Education for the Gifted, Fifty-seventh Yearbook of N.S.S.E. Part II (Chicago, 1958), p. 207.

curriculum, and method problems associated with it.

In the light of the present thinking about the question of ability grouping, many of the experimental studies seem inadequate. Turney suggests that, if the purpose is merely prediction, the best procedure would include the best measure of mental ability available and the best index of past achievement as bases for grouping. If, on the other hand, the developmental function of ability grouping is adopted, the criterion for grouping might well consist of a single measure; namely, the best index of mental ability available.

At this point it must be obvious to the reader that although considerable research has been done on ability grouping it is no wonder that under the circumstances no significant unanimity of findings has been reported.

To unify the findings of this study a succinct analytical summary is presented here of much of the writings on ability grouping previously treated in detail. This, in effect, presents a chronology of the work in the field and clarifies the concepts and changes as reflected in the literature. The progression emphasizes the trends and direction of the changes that have occurred.

# CHAPTER XI

## SUMMARY

The other important findings of this study are summarized in this concluding chapter. These results will be presented rather briefly here inasmuch as detailed information about the volume of writing is given in Chapter III, in Chapter X an evaluation summary is presented, and chapter summaries are given throughout the paper.

In spite of the difficulties of experimental design and interpretation just described in the previous chapters and granting that there are many issues concerning which there may be disagreement, it seems desirable in this conclusion to pull together those over-all findings concerning this study with which there is agreement and to weave them into a concluding statement of ability grouping.

From the volume of writing over the years 1918-1960, as revealed in Table I, it can be stated that interest in ability grouping has remained throughout the entire period of this study. In fact, the first five year interval showed the over-all greatest number of articles during the entire forty-three year period; never again did the number of articles reach this peak. The next interval disclosed a definite drop, and then the following two consecutive intervals indicate an upswing followed by a twenty year period of decline, and then again a steady but definite increase through 1960. It is probably agreed that this pattern is indicative of a continuity of interest but does it not

also reveal an unsatiated probing for a definitive treatment of ability grouping?

Throughout this paper many experimental studies have been cited and analyzed. It is evident many surveys have been taken, opinions given and volumes written until the available literature on ability grouping is overwhelming in amount. And ability grouping or the criticisms against it have been as legion as the attempts to modify and improve its efficiency. Better adaptation of methods and materials, varying rates of progress consistent with the ability of the students, reduction of failures, keener interest on the part of students, and better work have been given as arguments for ability grouping. But it must be remembered that the differences in number of favorable and unfavorable studies differ widely in quality, purpose, and significance. The studies covered grade levels from elementary school through college and dealt with a wide range of subject matter, some treating a single topic and some achievement in several topics.

Many may view this continuing search for answers as an indictment of our educational procedures. That the question of grouping has not been better managed; that throughout this period of forty-three years answers to many of the same questions are being sought may be difficult to explain. Part of the reasons for conflicting results are involved in the numerous and varied facets that vie for solution. Complexity of the problems of ability grouping must be evident from a reading of this study which indicates that ability grouping impinges on philosophy, psychology, sociology, administration, curriculum construction, adaptation, and teacher and pupil preparations. All are involved in the solution of the question, yet all contribute to the complexity of the

problem, since we aim at evaluating the finer aspects of human activity.

It should be recognized, at this stage, that the experimental literature has yielded no conclusions that are universally accepted. Final proof waits to be secured through the comparison of the instructional results obtained when all else is the same except the differences of ability grouping. We do not yet know well enough how to measure the kind of results which are the aims of ability grouping. Until we have developed adequate measures in the fields of attitudes, character, personality, habits of study and like facets of human activity, in addition to achievement and "potential," it will be difficult to evaluate ability grouping objectively and scientifically.

Although experimental studies have not settled the controversy over ability grouping, they have marked considerable progress in clarifying the problems, in making hypotheses, and in leading to better recognition and control of the significant conditioning factors. We have found that experimental studies have in general been too piecemeal to afford a true evaluation of results, but when attitudes, methods, and curricula are well adapted to further this adjustment of the school to the child, results both objective and subjective seem to favor ability grouping.

It may be that the final question of "to group or not to group" cannot be answered by statistical analysis. The few variables which are objectively measurable are closely associated with other factors for which it appears no satisfactory measurement exists. Consequently, it is difficult to apply strictly the single variable either in the arrangement and manipulation of the experimental situation or the statistical analysis of the results. However, the results of the present study offer some evidence that ability grouping can

be a factor in securing improvement.

The distinction which we underlined between homogeneous grouping and ability grouping should, we would hope, lead research workers and school administrators to great care in planning experimental studies and in evaluating any organization involving grouping. In such planning and evaluation the two types of grouping should be differentiated. If this could be done, it would seem that much clearer thinking and much more helpful results would be available.

From the findings of the research involved in this paper it seems evident that the results of ability grouping seem to depend less upon the fact of grouping itself than upon the philosophy underlying the grouping; the accuracy of the base or bases for which grouping is made for the purposes intended; the curriculum aspects of differentiation of content, method, and rate; the teacher, his attitudes, and his abilities as a teacher; and the general environmental aspects operating to influence the results.

It is reasonable then to conclude with the hope that a breakthrough may come in the evaluation of ability grouping so that a definitive treatment may be obtained. "It is a consummation devoutly to be wished."

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## APPROVAL SHEET

The dissertation submitted by Mary Healy has been read and approved by five members of the Department of Education.

The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated, and that the dissertation is now given final approval with reference to content, form, and mechanical accuracy.

The dissertation is therefore accepted in partial fulfillment of the requirements for the Degree of Doctor of Education.

January 10, 1962

Date

Signature of Adviser